

UDG UPDATE

Urban Design Group Update

BEN VAN BRUGGEN, THE UDG'S CHAIR SETS OUT TIMELY REMINDER ON ITS ROLE AND FUTURE

The Urban Design Group is a campaigning membership organisation. It does not own urban design: one of its strengths is in attracting exciting and unconventional people, and the realm of urban design continues to evolve. It only takes a brief look at trade magazines or recruitment websites advertising urban design jobs to understand that many people, while not being able to pinpoint the single job of an urban designer, know what one is, what various roles the job entails, and why it is valued.

In any one day, as an urban designer, I may be working on a masterplan, design guidance, or helping architects and clients realise the potential of their scheme and the place they are creating. I may be recommending architects for particular situations or helping planners to articulate the design of a scheme. I work alongside planners, architects, artists, surveyors, investors, landscape architects, specialists in private housing,

and specialists in affordable housing, project managers, engineers and others. I give evidence at public inquiries not as a planner but as an urban designer. Being an urban designer and a member of the Urban Design Group is recognised by all of these people, including the Planning Inspectorate. To coin a planning phrase: it has weight.

The professional bodies see urban design as something related but separate. The RTPI, RIBA, RICS and LI all recognise urban design as important and are starting to formalise accreditation for a broad range of urban design skills.

My view, which the recent survey of our membership has reinforced, is that the Urban Design Group is well placed to explore what it might mean to be a 'professional' urban designer, and what might be required in order to recognise that CPD is part of any professional career. It does not need to involve a laborious entrance procedure or restrict

membership to the UDG as a whole.

The Urban Design Group already hosts many events and contributes to support the Urban Design Summer School, and its members are constantly in demand for speaking at events and conferences. We do not need to monitor urban design education but to contribute to it. We want to make sure that our members get the most from urban design education and training events and are well supported.

On the UDG's website are a couple of papers about what we think is the right approach to this - we don't want and can't afford excessive bureaucracy, and we would not wish to exclude exciting or unconventional contributors. However we should strive to ensure that experience and commitment are recognised. Please take a read of these papers to see what we are proposing.

Ben van Bruggen

UDG to recognise practitioners and CPD

Radical new plans for the Urban Design Group aim to offer the identity and status that many professional urban designers have long wanted. The UDG will continue to be open to everyone with a commitment to urban design. The AGM in July 2006 approved the UDG Executive's proposal for a new structure for the organisation, following overwhelming support for the idea in an online survey.

At its January 2007 meeting the Executive took this further. Details of the latest proposal are now on the UDG website and members are encouraged to read about them and let us know their views.

The Executive proposes that, rather than introduce a new grade of associate member, the UDG should introduce a mechanism for recognising professional practitioners in urban design. The distinction UDG Recognised Practitioner would be open to anyone who has a recognised diploma or MA in

urban design; and who has devoted the majority of their working time to working as an urban designer at a high level (as defined by the UDG) for at least the past three years (or five years for candidates without such a diploma or MA).

Candidates will provide the UDG with a reflective summary of their urban design experience on an application form demonstrating how they fulfill the requirements, signed by two referees.

Recognition will be renewable on an annual basis for a fee, which will include free membership of the UDG. Renewal will be automatic, providing practitioners carry out CPD and activity to advance the practice and profession of urban design.

NEW MOVES ON CPD

The UDG is being asked to recognise, as CPD, training by other organisations. It is pleased to do this, and has now agreed the conditions.

The training must be proposed by a member of the UDG (individual or organisation). The proposer must provide a brief written description of the event, demonstrating the content and details of the delivery and how they meet the UDG's criteria. The aims of the training must be in accordance with the aims of the UDG. The content must be clearly identified with the practice of urban design, as set out by the UDG's criteria. Recognition will be on the basis of information supplied and will not imply any responsibility by the UDG for quality.

See the website www.udg.org.uk for more details of these two proposals, and please let us know what you think.

Rob Cowan, Director

URBAN
DESIGN
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DIARY OF EVENTS

Unless otherwise indicated all LONDON events are held at The Gallery, 77 Cowcross Street, London EC1 at 6.30 pm. All tickets purchased at the door from 6.00pm. £5.00 non-members, £2.00 members, £1.00 students

WEDNESDAY 18TH APRIL

TOWARDS THE 2012 OLYMPICS AND BEYOND

Speakers and Chair to be confirmed

2012 will be a significant date for London and the communities of the Lower Lea Valley. The development strategies coming forward must successfully accommodate the intensity of use of this major sporting event, but also leave a lasting and sustainable legacy for this deprived area of London.

What are the challenges before the development teams as they face a public countdown and scrutiny of progress? Will the spatial strategies ensure a sustainable use of and access to the Olympic facilities, accommodating a sustainable lifestyle for the communities of the future?

WEDNESDAY 23RD MAY

DELIVERING CLIMATE CHANGE THROUGH RESPONSIVE DESIGN: ARCHITECTURAL, ENGINEERING AND LANDSCAPE STRATEGIES

Although not an exhaustive solution to create sustainable communities, responsive urban and building design can contribute to address the challenges of climate change. The event will focus on the role of nature and climate in forming environmentally responsive design solutions for site layout and structures.

Speakers and Chair to be confirmed

WEDNESDAY 13TH JUNE

AGM & SUSTAINABLE TRANSPORT SOLUTIONS

Colin Buchanan's Urban Design Team

The event will address a range of scales, including the role of highway design, sustainable transport strategies at city level and the need to change attitude to transport modes, in the light of the continued dominance of the private vehicle and the current debate on the Government's road charging proposals.

WEDNESDAY 11TH JULY

Speaker and topic to be announced in July UD journal

UDG STUDY VISIT TO HAMBURG & LUBECK

21ST – 24TH SEPTEMBER 2007

Hamburg is the latest port city to redevelop its docks and create a new district, Hafen City. Though this huge project covering 155 hectares will not be completed until 2025, there is enough on the ground to get an idea of what it will be like. Two of the sectors are completed and the central area is being developed. In addition the Hanseatic city of Hamburg beautifully situated on the Alster is sometimes described as the most English of the German cities and offers interesting examples of business district renewal and of garden suburb. An hour away is the world heritage city of Lübeck, a beautifully restored medieval city. The study visit will cover both cities and include a guided tour of Hafen City.

The price per person will be approximately £400 including flights and accommodation (B&B) in a double room for members of the UDG. Single room supplement is £100. Booking early will ensure that we can get reasonable fares. Please contact Susie on udsl@udg.org.uk to register interest & for booking form.

Urban Design Group

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COVER

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LEADER

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CURRENT SUBSCRIPTIONS *Urban Design* Is Free To Urban Design Group Members Who Also Receive Newsletters And The *Directory*

ANNUAL RATES Individuals £40 Students £20

CORPORATE RATES Practices, Including Listing In The *UD Practice Index* And Website £250

LIBRARIES £40 **LOCAL AUTHORITIES** £100 (Two Copies Of *Urban Design*)

OVERSEAS MEMBERS Pay A Supplement Of £3 For Europe And £8 For Other Locations

INDIVIDUAL ISSUES Of *Urban Design* Cost £5

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NO COINCIDENCE: FUTURE PROOFING STARTS HERE

As we emerge from a strange winter of sudden rain, wind, snow and mild sunny days, both the causes and effects of climate change are at last being reported clearly and widely in all areas of the media. With the new Carbon Challenge by English Partnerships, six new code levels in the Code for Sustainable Homes, promised PPSs and their supplements, designers need to take a good hard look at their urban design principles to make sure that we can satisfy all of these important aims... where are the fronts and backs?

The ideas and work outlined in this issue focus on the less glamorous side of sustainability – adapting and future proofing our existing places and assets.

Regenerating our towns and cities to make good places for people and being resource efficient has been important for some years. But we also need to start battening down the hatches in a sense, as we pay the price of the environmental damage we've already caused, while busily planning for the future (as though it is still some way off).

To some it may all seem rather pointless or irrelevant without central Government forcing radical change from the top; but the eco-warriors are gradually becoming the new establishment and infiltrating mainstream thinking. The best way to contribute to this slow and quiet revolution seems to be by switching the lights off, putting the recycling out and spreading the word about what's already happening.

LOUISE THOMAS



Photograph: Katherine Heaton

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MATERIAL FOR PUBLICATION please send text by email to the editors, images to be supplied at a high-resolution (180mm width @300dpi) preferably as jpeg

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'Streaming' Urban Landscapes

THE GALLERY, LONDON 17 JANUARY 2007

Tom Lonsdale of Camlin Lonsdale outlined his concept of 'Streaming' Urban Landscapes, seeing landscape as the river of life where water animates landscape as people do moving through space.

He demonstrated this approach in a number of projects. Two of these were in Cardiff - the first was the space that linked the rail station, the bus station and a multi storey car park. Separate ownerships had pursued their own objectives resulting in a poor environment, and to overcome this a joint workshop was held aimed at getting participants to see things in terms of the users. The resulting scheme, involving land exchanges created a large pedestrian friendly orientation space, separate access for car drop offs, taxi points and the car park. In terms of water this could be seen as creating eddies, backwaters and larger pools.

The project that the practice undertook before this was the improvement of Mill Lane to create a café quarter out of a previously highway dominated area. The space was reallocated to provide a small margin to the mainly restaurant frontage, a

footway, a raised seating area defined by an avenue of trees and a railing along the one way road that remained. The management of the area was controlled by issuing licenses to use parts of the public highway.

The competition winning scheme for the redevelopment of the Odeon site in Bradford illustrated how reinventing the site in smaller elements gave bonuses - providing views through the site and enabling a populated space to be included as a focus within the site. The stream analogies were translated into elements such as eddy, rivulet and rocky bluff.

The practice was approached to find a new route for a river crossing at Newport to replace a historic gateway. The proposal was to replace a flood defence wall set further back as a landscape element, using the historic bridge as a pedestrian route linking adjoining spaces. In the event the bridge was moved further away from the old bridge and many of the ideas were lost.

The concluding discussion raised a number of practical issues such as the loss of parking spaces, where you need the support of councillors, and intentions about how those spaces



would be replaced possibly by other transport means, and the importance of overlooking public spaces to prevent abuse. For the management of specific spaces, it is better to have a dedicated management company rather than being part of a council's normal maintenance system. Finally when holding workshops it is vital to emphasise 'the sharing of perceptions' as although you need to be clear about how a space is used, local knowledge is essential to drive ideas forward. Landscape needs to be thought of as the whole scene including buildings, where the main ingredient is space - given meaning when used by people.

John Billingham

Design Codes

THE GALLERY, LONDON 14 FEBRUARY 2007

On Valentine's Day, Ben Bolgar of the Prince's Foundation and Roger Evans shared the platform to discuss design codes, and have both been working with design codes for some time. Ben gave the theoretical background to using codes referring to Andres Duany, Leon Krier and Christopher Alexander as sources of inspiration but also different approaches. While Krier concentrates on the relationship between urban form and architectural expression, Alexander is more interested in the process of design. Overall however, the purpose of coding is to achieve better urbanism.

In their application of coding, the Prince's Foundation goes through three phases: first analysing spatial and architectural types, 'the local DNA', to derive a pattern book. Second, they develop the master plan using Enquiry by Design to involve the stakeholders. Finally codes are abstracted from the master plan, providing parameters for the design concept, being flexible but also prescriptive.

Using Sherford in Plymouth, Ben showed different codes - generic ones

for the town, specific ones for the public realm, and process related codes. In conclusion he emphasised the need for clarity, transparency and competence, making the point that codes were no substitute for hiring good architects.

Roger Evans followed by attributing two roles to design codes: to communicate a vision, and to bring clarity on design requirements. He also considered that there were two types of codes but found generic ones - applied to a whole town and in the absence of a master plan - of limited application. By contrast, codes that are derived from a master plan and specify its mandatory and illustrative elements, were very useful. They could work at three levels: the urban structure dealing with street patterns and alignments; massing and urban form for streets sections, heights, plot series; and detailed codes for materials and street furniture. Roger emphasised their avoidance of codifying architectural detail. He described two of his firm's own projects Rotherham Riverside (as shown) and Newhall in Harlow, to make two essential points:



that land ownership is essential for the success of codes as there must be a commitment to applying them with rigour, and that any coding system must be able to deal with the exceptions.

Sebastian Loew

UDG events online



Now you can view Urban Design Group events online. UDG events are being recorded and made available on

the internet through the Urbanintell website.

Urbanintell's aim is to demystify urban design by providing access to some of the best thinkers in the field, linking theory and practice. 'It's one thing to read a report of a seminar or conference,' says Fergus Carnegie of Urbanintell. 'We learn a lot more when we hear the person, their intonation and how they express themselves.'

Carnegie, who trained in landscape design before taking the urban design course at the University of Westminster, is exploring what can be done with the internet. 'Providing information for access by computer is very different from making television programmes,' he says. 'People want straightforward presentations uncluttered by excessive packaging and introductions.'

Urbanintell will continue to record and broadcast UDG seminars and conferences, and to present an increasingly wide range of other urban design material. CABE's urban design summer school in Birmingham in June will be one of the highlights.

To the UDG the Urbanintell service makes it possible for a much wider audience – particularly outside London – to enjoy the monthly events. Over the past year the UDG's events at the Gallery in Farringdon have attracted growing audiences. It reflects a good choice of topics and speakers, and the promotion efforts of the UDG events team led by Cathryn Chatburn.

See the Urbanintell coverage at the UDG website at www.udg.org.uk

Rob Cowan

New UDG Francis Tibbalds Prize

URBAN DESIGN is launching a new prize for urban design projects, and entries are sought from practices and public sector offices. The best eight projects submitted will be determined in terms of their contribution to urban design thought and ideas, and will receive an

URBAN DESIGN Journal Project Award and be featured in the journal over the following twelve months. At the end of this period Urban Design Group members will vote for the Best Project which will receive the Francis Tibbalds Prize worth £1000. The only fly in the

ointment...? You need to be a practice or a local authority member of the UDG to submit an entry. Contact www.udg.org.uk to find out more.

John Billingham

Urban Design London: Master Class Series

25 APRIL 2007 – DESIGN OF INTEGRATED TRANSPORT AND INTERCHANGES, 24 MAY 2007 – THE ROLE OF THE DESIGN CHAMPION, 21 JUNE 2007 – DESIGN TO REDUCE CRIME



Urban Design London (UDL) is a networking organisation for staff and elected members from the London Boroughs and Transport for London, and it has been hosting a range of learning programmes since January 2007. These include a seminar series, master classes and opportunities for work-based

learning, and an e-learning package is in development. UDL also organise network meetings for urban design officers and one-off meetings to explore particular issues such as tall buildings, design review and design at appeal.

The successful master class series continues into the summer and they are chaired by the University of Westminster and the Urban Renaissance Institute (part of the University of Greenwich) featuring leading professionals and academics. They combine presentations from leading figures in urban design with discussion and hands-on activities to explore the issues.

- The April master class will look at best practice from international cities in the design of integrated transport and interchanges. Yo Kaminagai will talk about his experience with the Parisian public transport system and Tim Pharoah will present findings from studies of other leading European cities.

- In May the focus turns to the role of the Design Champion in local authorities, which have been promoted by CABE and other bodies. This master class will look at how design champions can be more effective, and will be presented by Jon Rowland, JRUD and Piers Gough, architect and Design Champion for Kent.
- The final master class of this series, in June, looks the principles for making safer places, the role of mixed uses, why natural surveillance matters, and public and private spaces. This session will be presented by Bill Hillier, Professor of Architecture and Urban Morphology at UCL, and Ben Castell, Practice Director at LDY.

Some places may be available for people from other agencies and the private sector. Please contact David Tittle davidtittle@tfl.gov.uk 024 7625 7659 for details.

David Tittle

UCE Urban Design Public Lecture Series

For the second year running, the Masters in Urban Design course at UCE Birmingham has been holding a monthly Urban Design Public Lecture Series. In partnership with our sponsors, Atkins Design, the series has attracted the bright lights of the urban design field in its broadest sense, from here and abroad. The most well-attended lecture was Martha Schwartz, whose engaging visuals and humoured explanations had the house well-entertained! Amongst others, West 8, Edaw, FAT and Gustafson and Porter have graced our stage. This year, the inaugural lecture was delivered by Francis Cuillier, winner of the prestigious French Grand Prix d'Urbanisme, who demonstrated the multi-tiered and strategic approach to transport, land use and density, and the public realm in French cities. Our sell-

out for this year has been Klas Tham, architect and masterplanner of Bo01 the City of Tomorrow in Malmo, where 'sustainable design' has been applied at all urban scales. The line-up for the remainder of 2007 looks as star-studded as the last with award-winning Danish landscape architect, Jeppe Andersen in March, David Ubaka Design Champion for Transport for London on 26th April, Piers Gough of CZWG on 3rd May and Paul Murrain on 31st May. Bill Dunster of Zedfactory has been scheduled to make an appearance on two occasions but has had to postpone due to gale force winds the first time, and then by heavy snowfall on the second. His message on how to design against global warming is needed now more than ever! The new date for his lecture is 10th May. Entrance is free to the lectures, which start at



6.30pm, and all are welcome. For further queries, please contact Dr Noha Nasser at noha.nasser@uce.ac.uk. We hope you will join us.

Noha Nasser

UCE Urban Design Lecture: Marcus Adams, February 15th 2007

Communicating the discipline of community design planning, Marcus Adams, Director of John Thompson and Partners, covered both the philosophy and practicalities of sustainable urbanism. Inventive and detailed in his explanations, he used a live paint tool to talk the audience through his case studies. We were a captive flock as he narrated the thought processes behind a number of active projects.

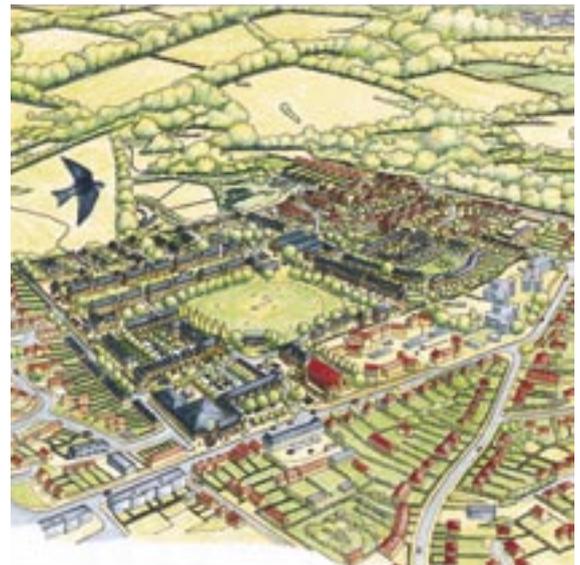
Using the redundant army barracks in Caterham as a case study, Marcus explained how this depreciating renaissance market town had suffered economically and how his vision and masterplan was 'strategy led and not funding fed'. Asking the million dollar question of how to create vitality and life in vacant areas, he went on to breaking down the answer into 3 key elements: social capital, environmental capital and economics. He explained 'longevity is essential, focussing on design for the needs of the next generation. Creating and delivering a community is becomingly increasingly challenging; the loss of civil engagement in the post war years poses a threat to the kinship we so desire. We need to understand the DNA of places, legible routes and connections, the manmade and response to the ever changing environment. We cannot leave economics to market forces, identifying

the draw combined with a well designed active environment goes a long way to creating the essential ingredients to a successful place'.

The community planning aspect of John Thompson and Partners' work remains the heart of their business; they provide a forum for the residents to voice their concerns and aspirations for future developments. Their processes bring local people together and help to create a sense of ownership. Caterham Barracks was a key example, where over 1,000 participants collaborated in a vision for the area. Not only did this create a cohesion of values and interests, new friendships came to fruition, helping to overcome social status, ethnicity and age differences; certainly a noteworthy definition of a sustainable community and significant of government attention in light of today's planning system.

To wrap up, Marcus was asked whether he would apply the same masterplan to Moscow as he would in a similar area in say, London. Referring back to the DNA of a place - the pattern in the way people live, cultural fit and orientation - he said 'the design of a place should never be pulled off the shelf, starting with the local place should be a winner in anybody's book'.

Emma Potter



Development Control Management: A Personal Manifesto?



Above The award-winning Wolverhampton New Market Square development, conceived by planners, project managed by planners and successfully delivered by planners working in partnership with the private sector, making a 25% return on investment

Who is this Graham King and how can this man, who by his own admission has wasted 30 years of his life getting it wrong, claim any credibility in what he says? What kind of local authorities employed him and tolerated him behaving the way he describes? There is none but a zealot of one faith suddenly 'seeing the light' and espousing another faith to turn out to be a bigger zealot and a bigger bigot than he was before conversion.

I do not recognise most of what Mr King describes as being public sector planners' culture and practices (The term 'planner' also includes urban designers, architects, conservation officers, engineers, ecologists, tree officers and landscape architects who work within Planning Services). When I worked for a number of local planning authorities I encountered many able, imaginative and caring planners, fully committed to serving and working with the community and business, their actions directed towards the wider public good. They actually largely followed the 12 principles of good practice advocated by Mr King, except that I do not recognise his assertions about all applicants being saints and bringing many 'masterpieces' to the negotiating table. The depressing fact is that the quality of the majority of the schemes being submitted ranges

from the mediocre and dull to the abysmally poor. Planning officers should be praised and not blamed for trying to improve submissions.

There are good and bad planners like there are good and bad professionals in the public sector as well as in private practice. This is not recognised in the one sided, partisan approach adopted in Mr King's article, the whole thrust of which is to promote his and the private sector's vested interests against the wider public interest and against his colleagues in local government. Having worked in and out of the public and private sectors for the past 40 years and seen both sides of the coin, I think I am entitled to say this.

Mr King's polemic reminds me of the silly, barking-up-the-wrong-tree campaign mounted against planners in the 1980s by architects like Michael Manser and Max Hutchinson, which damaged the standing and reputation of both professions. His reference to 'masterpieces' brings back ugly memories of the infamous phrase used to justify the demolition of a magnificent group of listed historic buildings in the City of London on the pretext that their replacement might possibly be a masterpiece.

OK, maybe Graham King is being deliberately provocative in order to spark off a debate. But he is going about it the wrong way and barking up the wrong tree. Or is there something else behind all this?

We live in a time when the 'Mixed Economy' ethos of the post-War years is under concerted attack by the Government and big business, who are pushing to shift the balance firmly in favour of a market-led economy or indeed governance. The pressure to diminish the role of the public sector is also impacting negatively on what is widely accepted as the best town planning system in the world, a model to be emulated. The strength of our planning system is that it is democratic and allows representation and negotiation. Its weakness is that it can be the subject of abuse by vested interests against the wider public interest. There is currently a haemorrhage of the best planners from the public to the private sectors. They are driven away by the burden of non-productive, soul destroying, control-freakery driven procedures imposed by central government; lack of respect for their work; constant attacks by those with vested interests; and by poor remuneration. If this trend continues unchecked, all that local authority planning services will be left with will be those few planners Mr King describes in his article and some colourless, odourless, faceless ignoramus 'managers' brought in to justify political spin.

Is this really in the true, longer term public interest or in the interest of private sector planners and professionals? The whole ethos and endeavour of our Urban Design movement has been to eradicate non-productive, short sighted, partisan and damaging divisions between the professions and those between the public, private and voluntary sectors and to engender joined-up thinking and working for the common good. So, do let us have a proper, all round debate in an inclusive, open-minded spirit and not starting from a 'holier than thou' attitude.

For information, I have recently retired from Wolverhampton City Council as Chief Planning & Highways Officer (September 2006) and am now working as an independent town planning and urban design consultant. I have also been made Visiting Professor of Architecture and Urban Design at the University of Wolverhampton.

Costas Georghiou, CNG Planning Consultancy

European 9

It's not often that something in a seminar makes you laugh out loud, but one did just that in December - in the middle of a discussion the next PowerPoint slide appeared declaring in big bold letters: 'Inverting the Backsides'.

To put this in context, this was pan-European urban design collaboration in action. Unfortunate translations aside, we were dealing with the serious subject of 'fronts and backs' in residential urban planning in a presentation of sites being entered for the European competition currently underway.

Now in its ninth session, European is Europe's largest housing design competition and is a truly European initiative, with around 75 sites in over 20 countries, from Italy to Estonia.

Design professionals under 40 years of age from all member states can enter schemes for any of the sites across the continent, injecting new perspectives on national debates. CABE runs the competition in the UK, in partnership with English Partnerships, the Housing Corporation and the Department for Communities and Local Government (DCLG).

Projects are typically situated within the context of a masterplan - with varying definitions and sizes. Entrants are encouraged to develop ideas that go beyond the site, responding to wider urban and social issues.

European differs from many competitions in that it is aimed at presenting entrants with real projects, dealing with real urban issues in housing, rather than being purely an 'ideas' competition. Typically, entrants have tended to be predominantly architects and successful teams tend to be collaborative groups of design professionals.

The organisers of European have observed the growing importance of wider urban issues in both the scale and the ambition of projects. To address this, the competition rules have changed, and for the first time European 9 allows other professionals to head up the entrant team. This allows urban design professions to take a leading role in the development of schemes, although the team always needs to include a qualified architect.

Over the 16 years that the competition has been running, it has delivered a growing number of projects, most successfully in countries such as Spain and the Netherlands. However,



this has not been the case in the UK and charged with improving our track record for delivery, CABE took over running European in the UK for its eighth session. With its ability to provide professional mentoring, CABE's involvement is beginning to show signs of success, bringing real prospective clients with real sites to the competition.

In spite of a buoyant construction industry, ambitious redevelopment targets, and widespread skill shortages, the UK is often risk-averse in the selection of design teams. Design competitions, especially open competitions, are rare, and many have observed that they too often result in a small number of firms being over-worked and over-used.

Although perceived as more risky, untested designers can flourish with a challenge. One of the rare examples of an open competition in the UK was the commissioning of the Walsall Art Gallery in the West Midlands - which was then short listed for the Stirling Prize. With the council as sponsor, this sizable project was won by Caruso St John Architects - who were working out of their living room at the time, and have since become a well-recognised practice working internationally.

After the Walsall competition, Peter St John (who is one of the jurors for European 9) has had much more experience of this type of design team procurement, observing:

'Design competitions are treated very differently across Europe: in

European differs from many competitions in that it is aimed at presenting entrants with real projects

Switzerland, for example, it has become commonplace for newly qualified architects to win a school project here, a housing project there, purely on the merit of their design, as assessed in competition'.

The winners of one of the European 8 sites, in Oldham, definitely see this as their big break. On the back of their success in 2006, architects Alex Franklin, James White and Phil Catcheside have set up their practice - LOOP Architecture - and continue to work with others in the winning team, urban designer Harry Dobbs, and interior designer Rachel Basha. These winners are typical, in that they are not straight out of college, but have a track record in established practices. Winning a large competition is precisely the way in which this experience can be released into the large scale project procurement process. The Oldham team are currently working up the scheme for detailed planning permission, and the project developer BASE, along with Great Places Oldham Rochdale Housing Market Renewal, and Oldham Metropolitan Borough Council, are aiming to start on site within the year.

The European 9 competition has three sites in the UK, in Stoke-on-Trent,

Above The winning scheme for the Oldham site in European 8 UK, by LOOP Architecture with Rachel Basha and Harry Dobbs Urban Design



Above View over the Skye Edge site, Wybourn, Sheffield – one of this year's sites

Milton Keynes and Sheffield. Building on the successful partnerships from European 8, these cities are keen to see the best possible ideas, and view the competition as setting the benchmark for design quality previously only thought achievable within the larger regeneration areas.

For some there remains the ultimate question about the UK's regeneration boom: are high design aspirations matched by the quality of projects finally delivered? Perhaps some would argue we have cracked the 'aspiration' nut – statements and briefs with great ambition are common enough. But when it comes to delivery, we too often appear to end up with less impressive built places. At a time when the country is undergoing huge housing growth, but of questionable quality, European offers a great opportunity to raise the bar, hopefully without inverting any backsides.

**Matthew Turner, Senior Regions Advisor
CABE**

Full details about European 9 can be found at www.european.org.uk and the final closing date is 28 June 2007.

When it comes to delivery, we too often appear to end up with less impressive built places

Be Inspired



CABE is hosting its fourth urban design summer school, on 24 – 27 June 2007 for everyone with a passion for places.

Each year the three and half day residential school welcomes all those whose work influences the design, development and management of the built environment. The school is a highly participative programme of design workshops and expert seminars, to enhance the knowledge and skills needed to create places where people want to live, work and play.

This year's school will be held in Birmingham. Appropriately, for a city that has seen so much change in recent times, the theme is 'transformation' and participants will benefit from visiting real sites and projects that are transforming the face of Birmingham today.

Launching the summer school at an event in Birmingham, Jonathan Davies Director of Knowledge and Skills at CABE said:

'The school has built up a reputation as a fun, dynamic forum for professionals to learn about the factors and people that contribute to good design. Disciplinary diversity is the school's real strength with participants ranging

from urban designers, architects and planners to politicians, public artists, and conservationists. Students are able to bounce ideas off each other and gain valuable new perspectives. By the end of the school an army of 120 urban design activists will go back to work reinvigorated and inspired with new ways they can champion the value of good design!'

This year's summer school will focus on three sites in the West Midlands – a site in Eastside, Birmingham, a housing market renewal area and a local market town. The projects are designed to mimic real-life challenges and frustrations and to encourage students to think logically about how they will solve problems.

Other course highlights for 2007 will include a daily newspaper on notable course events and characters, an alumni yearbook to help participants to stay in contact with each other, and an enhanced web resource that will enable learning and communication to continue beyond summer school event itself.

CABE's urban design summer school is open to anyone whose work has an impact on the built environment. To find out more and register your interest please visit www.udss.org.uk



Climate Change and urban form in Ireland

There is a famous paradox in ancient Greek philosophy: a tortoise challenges Achilles to a race, claiming that he can win if Achilles gives him a small head start. The argument is that although Achilles would cover the head start distance very quickly, the tortoise would by then also have moved further on. Each time that Achilles makes up the distance between him and the tortoise, there is a new distance to catch up on. Achilles can never win the race, for in a sense, he cannot even start. Everything is always moving forward, and it is difficult to catch up. No sooner are you where you think you are supposed to be, than you have to move on again to stay ahead. So, how do you catch up with, and get on top of climate change? In recent years, a debate has been raging about the appropriateness of different modes of spatial form in the Irish landscape. Dr. Seamus Caulfield, an archaeologist, asserts that the original, and therefore normative settlement pattern of Ireland, is dispersed housing. This assertion has been seized by the Irish Rural Dwellers Association as a core element of their lobby to champion Irish people's right to live in the landscape. Putting these agendas aside, there are more pragmatic issues to consider in the debate about where people live and why. Until recently, Ireland was a nation of small scaled farmers. Changing European agricultural policy, competition, and the 'Celtic tiger' phenomenon have contributed to the collapse of productive agriculture. However, an explosion in the demand for housing has spawned an alternative system of production: housing and landscapes of consumption - retail, leisure and office parks. Ireland is now a nation of property developers. A second factor relates to individual decisions about creating a home, whether self-build, personalised standard house types, or capitalising on space and cost (e.g. the bungalow is easily reproduced). Standardised designs and building technologies enable almost anybody to build the home of their dreams. This perceived liberty is not available in urban areas, where land and building costs are high, people perceive places to be cramped and 'everything looks the same'. These combined factors have forged a strong anti-urban growth pattern, expressed in the dispersed occupation of rural land. An alternative view exists for creating compact cities well served by public

transport and amenities. The arguments for this are strongly asserted; dispersed development patterns create massive commuting problems, as few people actually work in rural areas, and the potential for public transport viability is low. The two paradigms are locked in battle while the Irish landscape is changing dramatically and rapidly. The vacuum left by the collapse of traditional agricultural values is being filled by a new value system - the ownership of, demand for and use of cars for transport and a means of expression in the new consumption society. Clearly, this pattern is creating significant challenges for the way in which Ireland tackles climate change.

Recent research reveals the extent to which this predilection for car based transport makes Ireland vulnerable economically and environmentally. The amount of oil used for transportation has trebled between 1972 and 2003, with Ireland consuming 50% more per capita than the EU average, while transportation is the only sector in Ireland which continues to generate significant CO2 emission increases, six times the European average. Ireland is faced with high levels of oil dependence, and much of this is created by urban-generated rural housing and a rapidly expanding commuter network. This is momentous, especially if we are in a period of 'Peak Oil' production with plentiful supplies of oil no longer guaranteed. The National Climate Change Strategy begins with a quote that identifies this problem clearly as 'A grim future unless we change...'

Current reports assert that the answer lies in improving public transport and adopting better spatial forms of settlement. But how do you achieve these ambitions in the face of cultural challenges? Perhaps a growing awareness of the need for action on climate change is in fact an incredible opportunity for Ireland's urban form. Some commentators suggest that woodland will re-emerge on former agricultural lands, influencing land occupation patterns in Ireland's central belt. Similarly, research on wave energy shows Ireland's potential to capitalise on tidal power, whereby its western perimeter is a prospective powerhouse. Rail infrastructure and public transport in this zone could be powered by renewable and relatively cheap energy sources. Settlements could aggregate



Top Dispersed housing in the landscape is the norm in Ireland
Photograph: Dermot Foley Landscape Architects

Above New landscape and urban design structures for Ireland?
Photograph: Urban Initiatives

and re-organise around nodes of major energy capacity, where the real choice - or necessity - of sustainable transport modes exists. Indeed, perhaps the collapse of productive agriculture presents an opportunity to dedicate agricultural lands to the production of bio-fuels surrounding these settlements. Perhaps this in turn will affect how the land market in rural areas will operate? Within the settlements themselves, opportunities for the creation of individual, flexible and low cost building forms could be embraced as key elements of urban structure. These urban forms may become a self-organising system, limited by access to and the renewal of energy.

In a sense, the challenge of climate change could become the driver of a new, sustainable and exciting landscape and urban structure. How is that for paradox?

Diarmaid Lawlor is an Irish urban designer and landscape architect working in Scotland.



Adapting Cities for Climate Change

Sue Roaf describes essential actions for today's cities

Since 1992, the bulk of literature on the subject of climate change and the built environment has revolved around the challenge of mitigation. However people are now whispering that it may be 'too late to mitigate'. Our best chance is to concentrate on adapting to climate change and hope that we can simultaneously reduce emissions.

The clarion call from the climate fraternity has rung out this year as '2007 will be hotter than any year on record, ever, due to a combination of climate change and El Nino'¹. Under the gathering clouds of possible accelerated climate change, all comfortable talk of sustainability turns to more urgent murmurings of survival. Once unthinkable questions are being asked: 'I could hardly sleep at night last summer in my flat. How will I manage next summer if it gets even hotter?' or 'The water came right up to my doorstep last time it flooded. What happens if the floods are even higher? Can I afford my house insurance if it does flood?' and for city managers questions must surely be 'What plans have we got in place for an extreme heat wave?'

The triangle of risk has three sides: one for Hazard (how extreme will climate events be?); one for Exposure (where is your house in relation to the river? or do you live on the top floor beneath an uninsulated ceiling?) and the third for Vulnerability (how old or young are you? how poor or how ill?). Everyone should now check their own triangle and make a plan to 'future-proof' themselves against a changing climate. Cheap energy is no longer affordable, and a key feature of an ever angrier climate is that in extreme weather events the lights also go out, as the grids are damaged by storms or the system's capacity is tripped by extreme demand. In 'Adapting Buildings

and Cities for Climate Change'², we touched on a number of Day One Actions that to be taken in cities; every local authority should consider implementing some of the following this year at the latest:

Being safe from flooding:

- No more development at all in the flood plain³ and re-establish traditional flood plains
- Flood escape plans well prepared and rehearsed
- A water-proofing programme to re-soften city surfaces
- No underground car parks to be used when there may be a threat of flooding
- All single storey buildings to have an escape through the roof; residents of basement flats to be informed of flood escape requirements

Preventing overheating:

- South and west facing windows to have external awnings or shades
- New developments to have limited glazing to prevent overheating; with most windows openable
- Buildings to have thermal mass to provide at least 12 hours of thermal buffer to 'dampen' the diurnal temperature extremes during heat or cold waves

Staying warm in extreme cold or power failure:

- All vulnerable people to have access to free insulation and draught stripping
- A register of the fuel-poor or cold-vulnerable to be kept and checked if the power fails or an extreme cold event occurs



HAZARD
Climate change

RISK

VULNERABILITY
Building and urban design
Availability of cheap energy
Resilience of infrastructure

EXPOSURE
Location

Mitigate verb - to make something less harmful, unpleasant or bad

Adapt verb - to adjust to different conditions or uses, or to change to meet different situations
(www.dictionary.cambridge.org)

Opposite page Catastrophic floods in New Orleans in 2005 Photograph: John Byrne
Above left A new aesthetic for twenty-first century cities, Malmo Photograph: Sebastian Loew
Above The Triangle of Risk

- All winter fuel payments checked for payment and efficacy

Extreme weather events – all communities should have:

- A Safe Haven Refuge for heat, cold, stormy or flood events
- A well rehearsed plan for evacuating citizens
- Buildings with electrically operated locking systems should default to 'off' during power failures, and lifts to exit at the first floor when the power fails
- Local Community Liaison Officer networks for responses to extreme events
- All schools and care homes to have awnings or shades on south and west facing windows, and shaded outdoor place spaces with seating, with emergency response plans checked for extreme weather events

Architects should:

- Be required to set out an extreme weather response plan at the point of building handover with the Health and Safety Plan
- Power all buildings with maximum contributions from renewable energy technologies, while making the buildings optimally energy efficient
- Build in escape signage and lighting powered by locally embedded and renewable energy systems

Urban designers and planners should:

- Know how to plan settlements to optimise their solar potential
- Be able to design neighbourhoods with protective 'urban microclimates' to modify temperatures locally and optimise comfort, particularly during extreme weather events
- Know where the flood plain is and not develop on it
- Design extreme weather refuges in every new and existing neighbourhood
- Create a new aesthetic for twenty-first century cities - a vocabulary of acceptable urban images for cities including new cooling accessories, external shading devices like awnings and shutters, and integrated renewable energy systems

Legislators should:

- Insist that every new development optimises the use of renewable

energy to power that development, and becoming mandatory

- Ensure that every council develops and implements a Climate Change Action Plan that is effective in protecting our fairly fragile cities and society. In October 2006, Sir Nicholas Stern published his 'Review on the Economics of Climate Change'⁴. This first comprehensive review of the subject clearly demonstrated that all countries will be affected by climate change, but the poorest countries will suffer soonest and most. The major conclusions of the report were that average temperatures could rise by 5°C from pre-industrial levels if climate change goes unchecked. He showed that a warming of 3°C - 4°C will result in many millions more people being flooded.

He recommends three elements of policy for an effective response: Carbon Pricing, Technology Policy and Energy Efficiency. Carbon pricing through taxation, emissions trading or regulation would show people the full social costs of their actions; technology policy would drive the large-scale development and use of low-carbon and high-efficiency products, so that climate change is fully integrated into development policy. However my view is that long before Sir Nicholas Stern's three policy elements have a chance to kick-in, cities will already have begun to experience the dire impacts of rapid climate change. Many buildings, like numerous modern office blocks that are poorly designed for extreme climates, will lose their value⁵. Thousands of small businesses - the backbone of the British economy - will fail due to extreme climate events and who knows how many will have their lives destroyed in uninsurable buildings during floods, heat waves, storms and tornadoes. With so much at stake, it is time for every council and community group to act: it was the Great Fire of London in 1666 that gave us the Building Regulations. Perhaps the 'great scorching' of 2007 will give us the Climate Change Regulations?

Sue Roaf is a practicing architect and city councillor in Oxford.

1 <http://news.independent.co.uk/environment/article2116873.ece>

2 Roaf, S., D. Crichton and F. Nicol (2005). *Adapting Buildings and Cities for Climate Change*, Architectural Press, Oxford.

3 It can be argued that a complete ban on development in the floodplain is not practical or economic. In Holland, for example new buildings are still allowed well below sea level, but are designed so they can float on flood water.

4 www.sternreview.org.uk/

5 See www.gensler.com/faultytowers 'Faulty Towers'



Transport Planning in the Future

Chartered Engineer Richard Latcham calls for a rethink on the way ahead

LEARNING FROM HISTORY

Fifty years ago a group of passionate individuals, town planners, architects and engineers, lead by Colin Buchanan, began a study into 'Traffic in Towns'. The growth of the motorcar and its impact on urban living and environment was one of the big challenges facing Britain in the 1960s. Buchanan and his team met that challenge, transforming the way we plan for access and movement. Their approach was called 'predict and provide'. The synopsis – that society wishes to use the motorcar to the full, so we must accommodate them. Their challenge was one of design.

So what did the Buchanan report say? Interestingly, it proposed that a form of road user charging would be worth investigating, and that the only way to save cities from the motorcar was to create environmental areas and networks. We should separate vehicles travelling through towns from those having a purpose in towns, and that through-traffic should be channelled onto a hierarchy of distributors, with the urban motorway being the king. More crucially (and guaranteed to frustrate any urban designer) it stated that people should be separated from vehicles wherever possible.

Traffic in Towns was a seminal piece of work. However, we now recognise that society and our urban environment will be irreparably damaged if we let the car take over, so we must therefore adapt. Some of Buchanan's theories may not apply today, and indeed some of the findings may be wrong. But the real underlying challenges – transport and movement, urbanism and the threat of environmental destruction, are still valid today. So, do we have a new group of passionate individuals ready to tackle the great challenges of our time?

TODAY'S GREAT CHALLENGES

In 2006, we saw the publication of the Eddington Study, the Stern Review and the Barker Review. These studies highlight the strategic economic priorities for transport, the need to secure our future housing needs, and the requirement to pay for the full economic costs of climate change respectively. But what do they really say about transport in the UK and its role in tackling climate change?

Stern highlights that climate change must be tackled and the economic costs of not doing so. Barker talks about the pressing need to reform the planning system and cater for continued growth in housing. But it is Eddington that has most to say about transport - is he the new Buchanan?

Eddington's view is that everything is in the right place - that the transport connections are already there. He says that some parts of the network, like congested urban areas, inter-urban corridors and key international gateways are not working as well as they should and that improving the performance of the existing network is the priority for investment.

But the major issue he highlights is that transport contributes around a quarter of the UK's emissions and is the fastest rising source of carbon emissions within the economy in the near term. Eddington states that climate change is a global problem and that transport policy has no choice but to respond to the challenge of climate change, for both environmental and economic reasons. He says that addressing the challenge of climate change has important implications for any long-term transport strategy, acknowledging that transport users should



Opposite page The vision from 'Traffic in Towns' 1963

Above top An example of what roads are good for

Left Locally produced fast food available on streets

Right Transport infrastructure designed for people

meet all their external economic, social or environmental costs.

So, are there tensions between Eddington, Stern and Barker – and more importantly – do they give a clear holistic view about how the Government is planning to tackle climate change? The Government's advisors tell us that change is necessary – but do they really spell out how we should change?

THE FUTURE FOR TRANSPORT

Looking forward in time, we can be sure of one thing, we have to adapt our transport systems for climate change. Can you imagine a road or perhaps a motorway network with 10% of it flooded during the winter? What about London's Underground closed because its too hot to use in the summer? Leaves on the railway line? What about buckling rails and the failing signal systems? And let's not think about all those melting tarmac roads.

We have to adapt to meet the problems coming our way and we must change our behaviour to mitigate the effects for future generations. In short, we need a different approach to transport planning, and this approach must combine transport and movement, climate change and urbanism.

The premise starts by acknowledging that the days of simply accommodating the car have gone. We are already living in a world that involves managing the demand for movement and encouraging sustainable patterns of activity. This means more than advocating sustainable transport; it's about putting urbanism and climate change at the heart of all of our work.

We have some stark choices: do we tread softly testing new mechanisms of managing transport demand – like local road charging schemes and a bit more bus priority? Or should we force these policies onto people now – for example implementing a national road user charging scheme by 2015 and building new railways? Perhaps we should do nothing to adapt our transport systems until we experience a major crisis? Shall we wait until the system fails and then take whatever action is possible - close the motorways, or shut down some airports?

There are many ways to adapt our transport systems to tackle climate change, and these could also bring some significant benefits to our urban environments and urban communities. But we have to acknowledge that the future may not be one of an accessible city. The future may not be about having the ability to travel long distances in short periods of time. Instead we must start talking about accessibility within neighbourhoods and local communities - not accessibility within regions and between cities like it is today.

Perhaps our future is about slowing down. A future that looks more like past times – than unlimited travel. A time before the car was king, with compact cities and most people walking and riding bikes. A time of living and working in the same place with food grown locally and delivered to your door. Perhaps we're not talking about globalisation but a world of re-localisation and self dependency.

Richard Latcham is an Associate with Peter Brett Associates. He works on projects that integrate transport planning, municipal engineering and urban design.

ADAPTING TO A CHANGING CLIMATE IN URBAN AREAS



THE STORY SO FAR

In introducing this topic, it is worth stating at the outset that there is very limited evidence of practical adaptation to climate change in urban areas within the UK. This appears to be for three reasons:

- our overall response to climate change has focussed on mitigation rather than adaptation;
- where work has begun, it has largely addressed issues of building adaptive capacity, rather than delivering adaptation action; and
- even where such capacity building work has started, it has mainly been done in 'impacts' or 'sectors'. So, we can find work on the 'Planning Sector' or the 'Built Environment Sector' and on impacts such as 'Flooding' or 'The Urban Heat-Island Effect' but not specifically on 'cities' or 'urban areas' as topics in their own right.

This lack of adaptation action in the UK's urban areas is alarming, if only because most of the UK population lives and works in an urban setting. In 2001 nearly 80% of the UK population lived in urban areas which occupied 9% of the total land area. Nevertheless, it is possible to extract

from current research and studies examples which indicate the climate risks and to point to possible adaptation responses. The UK Climate Impacts Programme (UKCIP) has had some formal involvement in much of the work reported in this issue, either as a lead partner or through a role on the project steering groups.

UNAVOIDABLE CLIMATE CHANGE

There is now little doubt that the world faces a period of significant and unavoidable climate change, certainly through to the middle of this coming century (Hadley Centre 2005), and UKCIP observes that in the last few months, we have seen a step-change in accepting climate change as a result of human activity. Recent extreme events of flooding and heat waves, if not directly attributable to global-warming, certainly indicate the nature of forthcoming change and its consequences. Equally compelling is its recognition by non-environmental communities, such as in the Stern Review and in 'green' initiatives by Marks and Spencer and others. So, there is little doubt that without major reductions in greenhouse gas emissions over the next few years, the second half of the twenty-first century will face changes of greater proportions, with potentially devastating impacts on both natural and man made environments. The scientific evidence for this has been further confirmed by the recently published Fourth Assessment Report of the Inter-governmental Panel on Climate Change (IPCC 2007).

The prospect of these changes calls for the twin responses of mitigation and adaptation. Although many will consider mitigation efforts to-date to be inadequate, there have at least been attempts to develop policies and actions to reduce emissions and persuade others similarly. The same cannot be

said for adaptation. Even though a large proportion of the world's population lives within the reach of a potential sea-level rise, it is only recently that there has been concerted effort to address this challenge.

CLIMATE CHANGE SCENARIOS FOR UK

UKCIP provides scenarios for the twenty-first century UK climate using data developed by The Met Office Hadley Centre and has published these as UKCIPo2 scenarios. These indicate expected changes in two broad categories:

- long-term seasonal averages in temperature and precipitation
- the frequency and intensity of extreme events - rain and summer heat waves

The simple headline messages which describe the expected changes in the UK climate over the twenty-first century are warmer, wetter winters; hotter, drier summers; rising sea-levels; and more extreme weather events. The next set of UK climate scenarios is now planned for release in 2008, and includes a customisable weather-generator, which will provide data on extreme events such as heat waves, torrential rain etc. and which will be of particular use to urban designers.

BUILDING ADAPTIVE CAPACITY

UKCIP's purpose is to provide information to stakeholders on potential climate change impacts, so that they could prepare to adapt. Common tools assessing resources were developed to assist in creating a national picture of impacts, and working with stakeholders is central to our approach. Increasingly our work has moved towards exploring adaptation responses to projected impacts. Adaptation responses to climate change can be broadly classified as:

- Building Adaptive Capacity (BAC): such as undertaking research, institutional change, education and training, creating standards, legislation, management, and resources, and developing policies, plans, and strategies.
- Delivering Actual Adaptation (DAA): building flood defences or managing retreat, putting more nails in a roof tile, increasing the diameter of a drain, and creating 'siesta' times in a business or locality.

This classification has subsequently been used in the UK Government's Adaptation Policy Framework and is helpful in distinguishing between, on the one hand, organisational and institutional preparedness, and, on the other, the implementation of tangible adaptation actions. As can be seen from articles that follow, current examples of adaptation mainly fall into the category of 'Building Adaptive Capacity'.

THE CONTEXT FOR ADAPTATION

The following aspects determine some of the context within which adaptation must be considered:

- the physical properties of urban UK, its historical developments and current land uses;
- the relevant legislation and regulation that applies to the design of individual buildings;
- the land use and statutory spatial planning framework, within which decisions on adaptation must be made.

REFURBISHMENT OF THE EXISTING

Three quarters of the UK population lives in urban areas and the building stock in the UK is typically replaced at 1% per annum. So, a huge investment lies in existing buildings and infrastructure as well as their social capital. It is clearly more resource efficient, and hence sustainable, to make use of our urban fabric than to demolish and rebuild. So, although there



Opposite page Increasingly hotter drier summers Photograph: Susannah Gill
Above The challenge of refurbishing our existing building stock Photograph: Louise Thomas

is much to be done in designing new buildings and new settlements, the most benefit can be achieved by addressing the existing built environment. Therefore technical decisions on the adaptation of urban areas will largely be determined by what exists already: the buildings, infrastructure, land use patterns, etc. Unfortunately, remodelling existing urban form and retrofitting buildings will be challenging, if both adaptation and mitigation criteria are to be met. Specifically, it will be difficult to introduce passive cooling measures into existing buildings. The use of external shading devices, attached to building exteriors or included in external spaces, and built or natural, offer some possibilities here, and solutions will be very particular to location (e.g. the South East or North West), and to existing built form (e.g. a tower block or suburban semi).

LEGISLATION

Part L (and Part J) of the Building Regulations are the sections that deal with the thermal (and ventilation) performance of buildings. These are the aspects that will be affected most by a changing climate, particularly in cities in

the south of England. The latest revisions to Part L, which came into effect on 1st April 2006, address mitigation issues in response to European Directives. The only significant reference to a changing climate is contained in the following statement: 'Designers may wish to go beyond the requirements in the current Building Regulations to consider the impacts of future global warming on the risks of higher internal temperatures occurring more often. CIBSE TM36 Climate change and the indoor environment: impacts and adaptation gives guidance on this issue.' The consultation document for revisions to Part L contained a sizeable section on changing climatic conditions and identified the long investment periods of most buildings. It is therefore disappointing that the issue is not more prominent in these latest revisions, because the Building Regulations, whilst theoretically setting minimum standards, in practice define the standard which will actually be achieved for the majority of buildings in the UK.

PLANNING SYSTEM

The planning system seeks to control and influence development and respond to market pressures through strategic planning and development control. However, the objectives of the planning system have changed over recent years to encourage 'sustainable development'; these new policies are interesting because they seek to move beyond the traditional scope of spatial planning, into influencing the technical performance of individual buildings. Since the advent of the planning system, policies have sought to influence the visual qualities of individual buildings based upon considerations of conservation and latterly urban design. Now we find examples where planning policies specify the performance of buildings, with regard to their energy performance and water conservation or management. These policies are more effective in places where development pressure exists, as clearly demonstrated in London where the GLA and individual boroughs have been successful in implementing challenging policies for sustainable development and construction. There is little evidence yet of such policies extending to include consideration of climate impacts and adaptation, but we can expect initiatives in this area, particularly if the Building Regulations fail to address this agenda.

OVERVIEW

Whilst this topic issue of Urban Design cannot claim to be a comprehensive review of all the work in this field it does

provide a snapshot of progress to date. A couple of key points arise, namely:

- the biggest challenge is adapting existing urban areas to deal with the anticipated changes in weather and climate, and
- it is essential to consider the future weather and climate in all aspects of sustainable design and construction.

The technical challenges of adaptation to climate change are generally about modifications to the existing built environment. But, apart from large regeneration projects, the existing environment is not the principal focus of the main agents of change. For example, the design of new buildings, particularly sustainable ones, is far more rewarding to architects than refurbishing our existing stock, and it is hard to imagine prestigious architectural awards going to designs which climate-proof a Victorian terrace, a 1960s tower block or a semi-detached estate house. Similarly, the understandable focus of planning policy and for developers is on new developments such as the growth areas, and recent work by the GLA is an encouraging exception to this rule. The scope for urban designers is considerable, as adaptation strategies will need to be developed for existing urban morphologies in a variety of locations. So, what does a well adapted high-rise estate in south London look like? How can we best adapt a terrace of Victorian cottages in Macclesfield? What are the appropriate modifications to our major public spaces, streets and squares - particularly in London with increased day and night time temperatures compounded with its urban heat island effect?

The built environment is one of the sectors that will benefit most from considering both mitigation and adaptation together so that we address the twin challenges of climate change together. The benefits of 'climate-proofing' a project and achieving comfort conditions (both internal and external) whilst also providing low-carbon solutions, will need explicit stakeholder buy-in if addressing changing climate is to be treated seriously. This is doubly important while it is not a requirement in the Building Regulations. In practice much of the current work on sustainable building design, even much cutting edge work, fails to acknowledge the changing climatic conditions within which new buildings must perform. If low-carbon solutions are able to keep buildings cool at today's temperatures, it is almost inevitable that some form of artificial cooling will need to be introduced at some time during the life of the building, and in the South East probably in the next ten years. If this means that buildings intended to be sustainable will fail to survive the rigours of the new climate, they clearly will not be 'sustainable' for long.

Gerry Metcalf, Knowledge Transfer Manager, UK Climate Impact Programme

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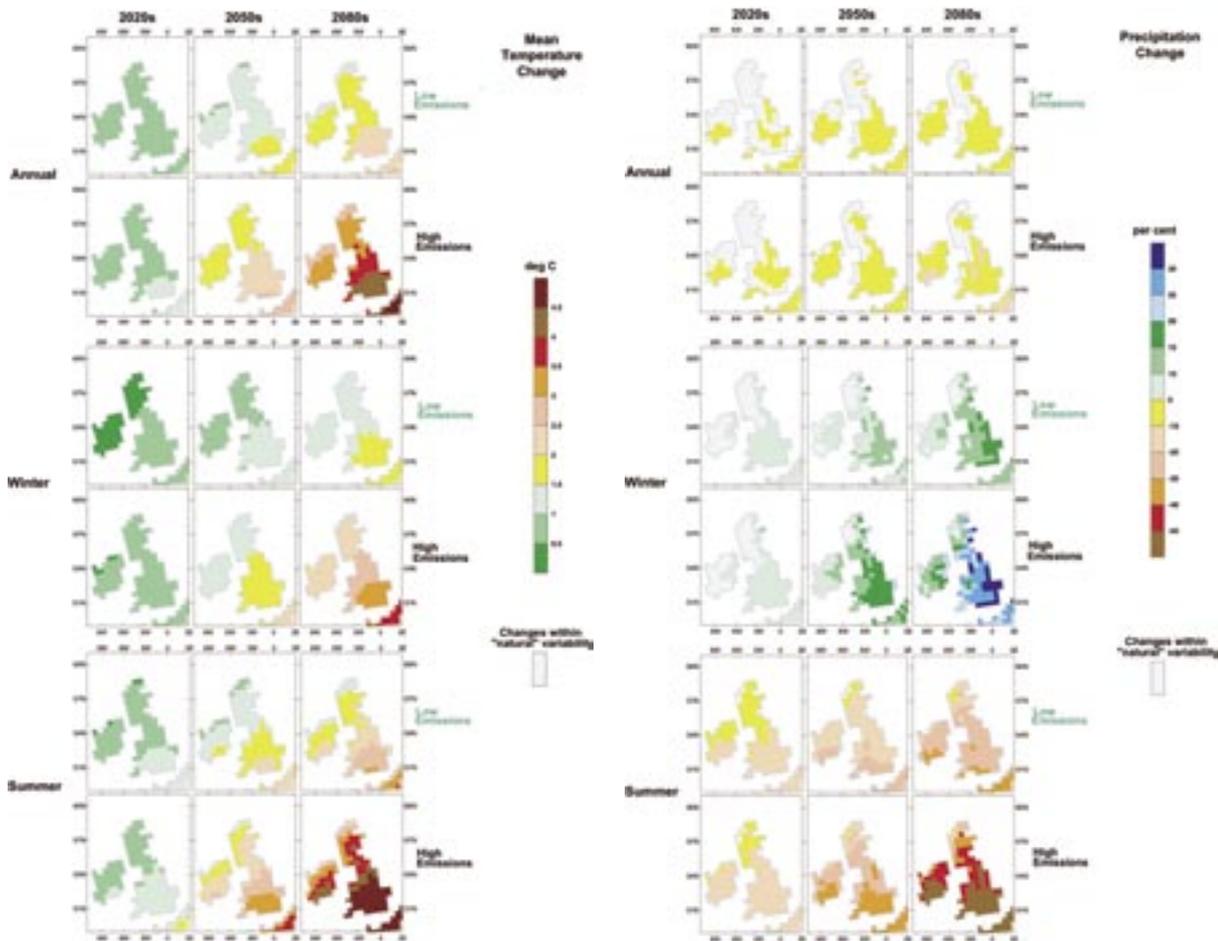
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ABBREVIATIONS

- ASCUE – Adaptation Strategies for Climate Change in the Urban Environment
 CIBSE – Chartered Institution of Building Services Engineers
 CURE – Centre for Urban and Regional Ecology, University of Manchester
 DCLG – Department of Communities and Local Government
 DCMS – Department for Culture Media and Sport
 EPSRC – Engineering and Physical Sciences Research Council
 NLUD – National Land Use Database
 SUDS – Sustainable Urban Drainage Systems
 TCPA – Town and Country Planning Association

CURRENT UNDERSTANDING OF CLIMATE CHANGE SCENARIOS FOR THE UK

Gerry Metcalf outlines forecast changes in temperatures and rainfall



THE UKCIP02 CLIMATE CHANGE SCENARIOS

The maps provide some highlights of the rich data available which describe probable climate in the twenty-first century. Much of the change in climate over the next 30 or 40 years is already determined by past emissions and the inertia of the climate system. On the other hand, the climate of the second half of the twenty-first century will be determined by the volume of greenhouse gas (GHG) emissions over the next 10 or 20 years. So the maps show a set of four alternative climate scenarios based upon four different scenarios for GHG emissions. These are labelled: High, Medium High, Medium Low and Low.

The maps show climate changes on a 50km square grid for three 30 year time periods through the coming century: around the 2020s, 2050s, and 2080s. These are reported as changes in comparison with baseline data for the same location during the period 1961 – 1990.

THE MAIN MESSAGES FOR URBAN DESIGNERS ARE:

- Timescale - the investment period for individual buildings, and more so for settlement form, require buildings and spaces to work not just for one but several different climate conditions through their operating life.
- Location - there is considerable difference in climate change for all variables from the greatest change in the South East to the least change in the North West. This is on top of the difference in baseline conditions from one location to another.

- Overheating in summer - increased summer temperatures in cities will be compounded with further temperature rise from the 'urban heat island' effect.
- Torrential downpours of rain to plan for.
- Changes are fairly certain for the first half of the century, but vary according to GHG emissions for the second half.
- As well as this type of average data, there is also data which show the probability of a given threshold (such as a daily maximum temperature) being exceeded, as further detail.

SIMPLE MESSAGES

The maps convey the likely changes in the UK climate, but without reference to these, numbers, maps or other complicated reporting, the following points emerge:

- Averages (annual and seasonal)
- Warmer, drier summers (spring and autumn too)
- Milder, wetter winters
- Rising sea levels
- Extremes
- More very hot days
- More intense downpours of rain
- Shorter return periods for high water levels at coast
- Uncertain changes in storms – possible increase in winter.

Gerry Metcalf, Knowledge Transfer Manager, UK Climate Impact Programme

DESIGNING OUR WAY OUT OF THE CLIMATE CHANGE CRISIS

Polly Turton outlines CABE's work on climate change to date and future directions



The global environmental crisis we face is, in large part, a planning and design crisis. It is a consequence of how things are made, resources are used, land is developed, buildings and infrastructure constructed, services supplied and places connected.

The UK's built environment is responsible for between 40 and 50% of our national energy consumption and carbon emissions, yet when buildings and places are properly designed, they can encourage and support low carbon, sustainable lifestyles. If we are going to meet national and international targets for reducing carbon emissions, and wider sustainability targets, then those responsible for planning, designing, constructing and managing our urban environments have a crucial role to play. We can design our way out of the crisis.

There is an imperative to reduce carbon emissions to mitigate against the effects of climate change, and to adapt our cities to the inevitable and unavoidable changes in our climate already on their way. More sustainable places and lifestyles will bring about a higher quality of life.

Sustainable development and climate change mitigation are key Government priorities – that was made clear through 'Securing the future: delivering UK sustainable development strategy' (2005) and 'The Stern review on the economics of climate change' (2006). The

Stern review argues that efforts made now to mitigate against and adapt to climate change will not dent the public purse too much, but any delays will come at a significant financial, social and environmental cost. All central Government departments and their agencies are now required to produce sustainable development action plans and report back on them annually. It is no longer a question of whether to do anything about climate change, but what to do and how to do it. As a DCMS sponsored body, CABE belongs to the DCMS Sustainable Development forum which shares good practice on embedding the principles of sustainable development within our strategies, policies, operations and communications.

New policies are putting design quality at the heart of the planning process; the launch of the Code for Sustainable Homes, the PPS1 Supplement on Planning and Climate Change, and 'Building a green future: towards zero carbon development' are part of a major process of re-orientating for the planning system. Low and zero carbon homes will require creative thinking and good design, and not just at the building scale. The 'carbon challenge' to housebuilders launched by DCLG in January is particularly exciting because its focus is the entire community, and its stringent specifications demand innovative design solutions.

Only a strategic approach to urban design can support living and working patterns that require less car use, reduce consumption of natural resources, support biodiversity and manage water in the urban environment more effectively. The city–region is a living system, with political, economic, social and ecological cycles which should be brought together through the processes of planning, design and management. Place-making has a key role to play in supporting the low carbon, sustainable and inclusive lifestyles of the future. There are numerous opportunities, for instance in Housing Market Renewal areas, to demonstrate how climate action supports social inclusion and improves quality of life in deprived areas. Homes that are cheaper to heat can avert fuel poverty, and transport that is more

accessible avoids isolation for non-car owning households.

A handful of places exist in England which we can learn from, such as Upton in Northamptonshire and BedZed in Sutton. But time and again, CABE has to point to Germany, the Netherlands, and Sweden for examples of truly sustainable places and communities – think of Vauban in Freiburg, Nieuw Terbregge in Rotterdam, and Hammarby Sjöstad in Stockholm.

In this country, our work indicates that there is a long way to go. In February CABE completed a national audit which showed that 82% of new housing built over the last five years fails to measure up on design quality, and 29% of developments are so poor they should not have even got planning permission. The most serious failings concern place-making and the public realm. Many developers are also not taking sustainability seriously yet – despite a recent survey by MORI which indicates that people want, and are prepared to pay more for, sustainable homes. This is improving as one would hope with two thirds of a million homes being built in England over the next five years – but this change needs to speed up.

The integration of urban areas into a working landscape, with multi-functional open spaces is something which CABE has spent some time thinking about. Last year we led the first in-depth study into the character and identity of the Thames Gateway. Our aim was to capture the unique qualities of the landscape and places there and look at how these can be used to ensure that new development there is of a high quality. The study was commissioned by DCLG to drive investment in an under-valued area. The Thames Gateway character is defined by the river and its estuary, and a pioneering spirit. It provides an opportunity to establish a new working landscape supporting environmental technology, low carbon communities, more localised food production, renewable energy creation, flood risk management and enhanced biodiversity.

Increasingly, we will see well irrigated green infrastructure and open water features being used to combat the urban heat island effect. Solar control can be applied through narrow streets, vegetation canopies and louvres for shading, as well as orienting buildings and using advanced glazing systems. Protection from storms can be mitigated through water-proofing building materials and using overhangs to protect doors and windows, and by creating sustainable drainage systems such as swales along streets to deal with excess water run-off. Making building foundations deeper and infilling them will make them less susceptible to subsidence.

The planned TCPA guide on ‘Climate change adaptation by design’ will describe these strategies in much more detail. The guide incorporates the UKCIP climate scenarios and the findings of the ASCCUE research project undertaken by the University of Manchester’s Centre for Urban and Regional Ecology (CURE). CABE is co-funding the TCPA guide, and held an expert seminar on the implications of climate change for the built environment with UKCIP and CURE in September 2006.

Whole life values thinking and sustainable procurement are essential when making decisions about investment in the planning, design, construction and management of sustainable buildings, spaces and places. This is encapsulated in the Treasury’s Green Book on Appraisal and Evaluation in Central Government, and the importance of design quality, procurement and facilities management is likely to be a central element of the DTT’s ‘Sustainability strategy for the construction industry’. As well as promoting strategic sustainable urban design, we need to get our own houses in order. So what have we done so far?

Last July, CABE appointed sustainability consultants Beyond Green, and ecological and carbon footprint experts Best Foot Forward, to undertake a comprehensive sustainability audit – from our operational procurement policies to the advice and practical help we supply. This has led to a ‘green housekeeping plan’, an action learning process for reducing our footprint, and a



programme of training and development on sustainability for all staff and our expert panels.

New research projects and good practice guides are planned for this year, including looking at the design implications of the sustainable places and lifestyles of the future, and another identifying case studies of public space adaptation to climate change.

Many designers still see design quality and sustainability as two separate issues, one a matter of aesthetics, the other a question of technical solutions to problems of reducing energy consumption. But from CABE’s perspective these are inseparable. Design quality, after all, is not just defined by how a building, space or place looks, but how it functions, how it meets the social, economic and environmental needs of the people it serves, and how it can be managed and adapted as those needs change over time.

Sustainability and climate change are not the next big thing for planners, designers and managers of the urban environment – they are the thing, and the environmental imperative must be the design cue for the twenty-first century.

Polly Turton is Senior Public Affairs Advisor, CABE

Opposite page

A good example of environmental design, St Francis of Assisi Academy, Liverpool, Photograph: Simon Foxell

Above top Mile End Park, Photograph: Michele Turriani

Above Malmo, Photograph: Nicole Collomb

GREEN ASSETS

Liz Greenhalgh describes how to use green spaces to help cities adapt to climate change



Photograph: courtesy of
Trees for Cities

In the late 1980s dismay was mounting about the decline of Britain's legacy of public parks. Many aficionados, garden experts and bewildered park users voiced concern over the sometimes dramatic degradation of important public landscapes and previously admired and highly valued public parks. For a mix of reasons, attention had turned during the previous decades to newer indoor leisure facilities and park budgets were carved up between competing interests. With municipal nurseries closing and horticultural expertise fading, these older often Victorian sites, were overlooked and urban green spaces suffered from a lack of strong defenders and a loss of decisive policy.

CHANGING FORTUNES

During the 1990s interest in the value of the public parks network grew and the

Heritage Lottery Fund (HLF) made public parks a beneficiary of (the then new) lottery funding. Since the late 1990s, £380 million has been invested by the HLF in restoring landscapes, park designs and buildings in 245 sites; for example, the 55 acre Saltwell Park 'the People's Park' in Gateshead which has been lovingly reinstated as a major public amenity, attracting more than 500,000 visitors a year and demonstrating that with proper investment and good management such places are still central to their communities.

With the arrival of CABE Space and its public remit to think about, defend and champion public space and urban parks, came a flurry of research projects, campaigns and a manifesto. Dozens of enablers were sent out to work with local authorities on the development of park management and green space strategies. The economic case for green space was made, the health benefits were considered, the benefits and disbenefits of green space in housing renewal areas were deliberated. The most hated, loved and wasted spaces were brought to public attention as well as the core arguments that parks were central to the concept of social cohesion. The importance of staff and the skills needed in-day-to-day management of parks, the impact of good and bad design were also brought to light as the Government included green

space within its cleaner, safer and greener agenda for sustainable communities. It wasn't just that we had forgotten the worth of green spaces, but we also had to learn new and better ways to manage them (whether we're going to pay for them properly has yet to be seen).

A NEW RATIONALE – A NEW LEGACY

Over the last few years with many initiatives such as the Green Flag Award, Doorstep Greens, Groundwork Trust and others, a lot of energy and effort has gone into making the case for valuing urban parks and green space, and recognising the social goods they can deliver. The basis of much of this mostly useful work has been to proselytise, advocate, campaign and make explicit the benefits we already knew, but took for granted. Now we are beginning to understand another compelling case for reconsidering the relationship between a city and its (private as well as) public gardens, parks, communal grounds and public spaces – and that is the way these green assets may help cities to adapt to the changing climate.

There is a growing body of analytical work on the beneficial effects of urban green space on micro-climate, air quality, hydrology and on reducing the effects of the urban heat island phenomenon (defined as the higher temperatures measured in urban space compared to more rural surrounding areas). Urban areas absorb more solar radiation and in turn heat the air. The urban heat island can work to intensify the impacts of temperature rises within cities. Tree shading and the cooling effect of urban parks in sub-tropical climates have been explored in climatic research elsewhere. As part of the preparation for climate changes in the UK and in response to the UKCIP climate scenarios, research is underway on both building knowledge for a changing climate and for preparing strategies to adapt.

A project run under the research programme Adaptation Strategies for Climate Change in the Urban Environment (ASCCUE) has begun to look at the performance of green space and how it can affect surface temperature and water run off. John Handley, Roland Ennos, Susannah Gill and colleagues at CURE have begun to model the performance of green areas and have opened up significant research exploring the spatial pattern and attributes of green spaces in relation to their environmental performance. They have shown that green spaces and vegetation do affect micro climates. Adding green cover reduces maximum surface temperature, whilst decreasing (trees, shrubs, vegetation) increases it. The research suggests that surface temperature depends largely on the proportion of green cover. As temperatures increase over time, the effect of green cover in cities will become more critical. Importantly, the effect of green cover is greatest in locations where there are few green areas. These findings have a particular bearing for town centres and for high density residential neighbourhoods.

COOL

Urban green spaces are also vulnerable to changes in climate. We must understand these vulnerabilities to ensure that the potential for green areas to moderate climate changes and help cities to adapt are not lost. Part of the cooling effect of vegetation is caused by evapotranspiration – vegetation releasing moisture into the surrounding atmosphere. In the case of drought, where grass dries out and shrubs and trees are under stress, this cooling function is diminished, and the contribution vegetation makes to moderating high temperatures reduces or even stops. In these situations, the cooling effect of water surfaces continues to be influential.

The implications of the ASCCUE research are that we must protect existing green spaces and infrastructure, and where possible add to the portfolio of types by considering green roofs and building facades. Trees, especially those with mature canopies are expected to play an important role in



Above The importance of shaded public spaces, Avignon, Photograph: Chris Edwards

extenuating the effects of higher summer temperatures. However, all of this depends on water and on keeping the evapotranspiration function going. Watering will become increasingly important during heatwaves and times of drought.

LUSH

The challenge for all professional groups linked to urban design and management is to try (as an adaptation response to increased summertime temperature) not only to keep and where possible increase the stock of trees, parks, allotments, cemeteries and the many other types of public open spaces, including street trees - but to keep them watered.

Much of the horticultural world's response to gardening in the twenty-first century has been to consider planting drought resistant species to cope with the increased temperatures and lack of rainfall. This is a logical response. However, although it may be counter-intuitive, the more leafy, verdant species that offer effective evapotranspiration in summer (and are better able to survive wetter water-logged winters) should also be part of the mix. The challenge is to find ways to keep green spaces suitably watered during periods of drought (hose-pipe bans) without using the drinking water mains supply. A number of local



Photograph: courtesy of
Trees for Cities

authority landscape managers, park managers and tree officers are now actively considering arrangements for capturing and managing rainwater, run-off and flood water for use in maintaining what will be an increasingly important resource in our cities. There are schemes underway to capture and store winter rainfall for use in the summer. These kinds of practices are already used by the golfing sector in the water resource management for golf courses.

TREES

Another of the messages emerging from the ASCCUE research project is the important contribution that trees can make in providing valuable shade to protect people and buildings from overheating, especially in the increased summertime temperatures we expect in urban areas. An obvious adaptation response to hotter summers is to maintain and where possible increase the numbers of trees in gardens, streets, squares, school playgrounds, footpaths and housing estate landscapes. However, the question of trees appears fraught - building owners and their insurers are increasingly concerned about the impact that the roots of street and garden trees can have on buildings. Fear of tree damage during storms and high winds

also fuel demands for the removal of trees, and local authorities find it hard to resist applications for the removal of trees. The portrayal of climate change in highlighting freak weather and danger has in some cases (ironically) contributed to a fear of falling trees. Within this context, and as part of an adaptation response, we need an urgent but rational debate about how best to accommodate more trees in urban areas.

RAIN

The researchers also looked at rainfall and the effects that green space had on surface water run off. Although run-off is dependent on soil types, areas with high run-off tend to be those with sealed surfaces such as tarmac found in most town centre areas. Increasing green cover, in particular tree cover was shown to help to lower the run-off. Again, this has implications for thinking about adaptation measures for coping with heavier downpours of rain. Trees and vegetation together with more permeable ground surfaces and other kinds of sustainable urban drainage may help urban areas to cope with changing patterns of rainfall. For the urban landscape this may mean re-thinking some current trends, such as paving over front gardens for use as hard standing for cars or allowing infill development within susceptible areas.

A PRACTICAL PROSPECT

The evidence emerging on the value of green areas in helping us to cope with changes in climate is clearly relevant for all those involved in planning, urban design, landscape and park management. More research is planned to model and quantify indicators of green space performance to work out what spatial configurations and other characteristics of vegetation might function best in British urban climates. The capacity for green landscapes, trees and vegetation to help us adapt to climate change escalates the already significant value of our urban green places. It could also stimulate the use of new green features at all spatial levels. We may need to consider the use of courtyards, verandas and balconies; features (common elsewhere in Europe), which break the strict boundaries between the inside and outside of buildings as well as greening building facades, that help keep walls shaded. Revitalising the (often poor quality) housing estate landscapes between the buildings where people live and re-investing in neighbourhood parks and making sure that people can use parks as cooler sanctuaries when they need them will help as indeed, will more ambitious bits of green infrastructure within and surrounding cities and regions.

The researchers from CURE have already argued that within the Government's Sustainable Communities Programme there is scope to 'climate proof' new developments in the Growth Areas and areas subject to Housing Market Renewal. Green infrastructure ideas are beginning to be considered in for example the Green Infrastructure plan for Sustainable Communities programme in the Milton Keynes and South Midlands Growth area. The plan sets an ambition for strategically planned green infrastructure across the sub-region at all spatial planning levels including Local Development Frameworks.

Understanding the role of functional green infrastructure, working it into adaptation responses to achieve higher quality environments and taking account of the crucial skills of management and community involvement is an optimistic, challenging but very practical prospect, and may create a new legacy of green urban spaces.

Liz Greenhalgh is Project Officer (Local Authorities) at UKCIP

EMERGING INFORMATION ABOUT THE 21ST CENTURY'S CLIMATE

Gerry Metcalf describes the UKCIPo8 Climate Change Scenarios

Work is already underway at the Met Office Hadley Centre to establish the next data set for the twenty-first century, known as UKCIPo8. UKCIPo8 will differ from the previous UKCIPo2 climate change scenarios as it is designed to provide greater benefits for users. The changes and benefits are divided into those associated with Modelling, Presentation, and Delivery.

MODELLING

The climate changes described in the UKCIPo2 Climate Change Scenarios are based on the average of three runs of the Hadley Centre climate model, providing a single result (i.e. an amount of change) for each emissions scenario, which is then scaled up or down for the other emissions scenarios.

UKCIPo8 however will be based on a large 'ensemble' of Hadley Centre climate model runs, and the final results will also incorporate information from single model runs of other IPCC climate models. One of the main benefits will be that the UKCIPo8 output can be described in probabilistic terms, which is better suited to risk based decision-making for adaptation, and invites a more quantitative approach.

PRESENTATION

UKCIPo8 will also provide climate change scenarios for the UK in:

- 25 x 25 km grid squares
- aggregated results for administrative regions and/ or river catchments
- overlapping 30-year time-slices, moving forwards in time with an increment of 10-years (i.e. 2011–2040, 2021–2050, etc until 2071–2100), rather than set periods, and
- three future emissions scenarios (High, Medium and Low)

This means that:

- the use of 25 x 25 km grid squares will provide better depiction of 'local' climate changes through improved representation of the coastline, islands and local topography;
- including aggregated results will provide communicators and decision-makers with consistent and robust summaries of the 'typical' climate change anticipated for specific parts of the UK, and are expected to be useful for regional or hydrological organisations;
- the provision of overlapping time-slices will allow the evolution of changes in climate to be tracked forwards in time, and should avoid the potential problem of 'steps' between adjacent time-slices; and
- the use of three emissions scenarios has the advantage of providing a single 'middle' scenario. UKCIPo2 users were previously faced with the potentially-confusing 'Medium-High' and 'Medium-Low' scenarios.

DELIVERY

UKCIPo8 will be delivered as 'scientific' and 'summary' reports, and include maps, technical information and guidance, similar to UKCIPo2, but a new dedicated web interface will be developed to convey tailored climate change outputs in user-friendly formats, such as:

- the range of changes for climate variables
 - the change associated with a specified probability
 - the likelihood of exceeding a specified threshold
 - combining probabilities and multiple climate variables.
- This will bring benefits such as:
- improved access to the climate change scenarios, and a single source for UKCIPo8 related information, documentation and guidance
 - a variety of different access levels to the scenarios depending on user needs
 - a future time weather generator to be simulated, for daily weather variables, thresholds and sequences or extreme events, and
 - guidance to show how best to use climate change information in decision-making.

Further information about UKCIPo8 can be found at: <http://www.ukcip.org.uk/scenarios/> and urban designers can participate in the further development of UKCIPo8 at seminars and workshops. This will allow partners, stakeholders and users to refine the usefulness and presentation of the UKCIPo8 scenarios. To get involved in this please email your contact details, areas of interest or professional role to ukcip08@ukcip.org.uk

Gerry Metcalf , Knowledge Transfer Manager, UK Climate Impact Programme

ARE URBAN ENVIRONMENTS DESIGNED FOR CLIMATE CHANGE?

Michelle Colley urges designers to find practical ways of managing climate change risks



Above Museum Square, Amsterdam

Today we have enough information to take the effects of a changing climate into account, and yet urban design decisions continue to be made without understanding the realities we face.

TWO CLIMATE CHANGE CHALLENGES, NOT ONE

The climate change focus for most urban designers has so far been a range of mitigation actions, including reducing greenhouse gas emissions, encouraging public transport, energy efficiency and a non-carbon future. But this is only half the picture. There is another challenge to be faced - that our climate is already changing.

The summer of 2003 was unusually hot throughout large parts of Europe, causing severe service disruption and approximately 2,000 excess deaths in the UK. It is estimated that the risk of unusually high European temperatures has already doubled due to man-made emissions. The summer of 2006 broke records as the longest continuous period of hot weather experienced in the UK since records began, and Met Office models indicate that very hot summers like 2003 could be 'normal' within the next 30-40 years.

Even if we make a significant reduction in greenhouse gas emissions, we will need to cope with at least 40 years of inevitable climate change. The future climate is already set over this time period and the consequences for urban design can no longer be ignored.

So there are two climate change challenges - firstly, greenhouse gas emissions must be reduced over the next 10 years if we are to avoid catastrophic

climate change – becoming carbon neutral is essential. Secondly, we must adapt to the climate change we cannot now avoid.

RISKS OF INACTION

Our built environment, economic structures and social and cultural systems have developed over many years in response to relatively stable climatic conditions and we use historic climate as the basis for designing buildings, infrastructure and urban spaces. In a changing climate these systems and structures are increasingly exposed to extreme weather conditions and changing long term average climate conditions. Decisions based on analyses of historic climate data are no longer 'future-proof'.

We are faced with increased risks of flooding, heatwaves, drought, pressures on water supplies, impacts on bio-diversity and our landscapes. Many of these impacts have been well reported, but we are also faced with social and economic impacts: on supply chains and logistics; on markets, goods and services; on the design performance and maintenance of infrastructure; and on the environment in which we live, work and play. These changes will affect the fabric of our urban and rural communities,

Urban design has a major responsibility to meet this challenge by developing spaces and environments that take account of changing risks over both the spatial plan period and the lifetime of any asset. The legacy of a decision made today may extend far beyond the plan period and politicians in particular must acknowledge their responsibility when making decisions to give far greater weight to the future than to current political objectives and expediencies.

Urban designers, planners and politicians therefore have a choice – they can act on the information available to make decisions that are robust in the face of a changing climate, or they can choose to ignore it and fail the communities they serve.

There is little evidence that even the most modern urban spaces are designed to cope with a future climate. How will they perform in 30 years time with higher temperatures? Will they meet the changing demands placed upon them by their users? Are they built according to historic climate data, or designed to take account of available climate change information? Are these issues taken into account at the design stage? How many planning authorities have asked for an assessment of the impact of climate change on the proposed development, based on the

UKCIPo2 scenarios of climate change?

In preparing the Planning Policy Statement (PPS) 'Planning and Climate Change', the DCLG accepts that planning should help to shape places with lower carbon emissions and resilient to climate change when providing for new homes, jobs and infrastructure needed by communities.

The following brief case studies provide practical examples adopted in the UK and overseas to manage various climate risks.

ADDRESSING FLOOD RISKS: MANAGING STORMWATER IN SEATTLE.

Increased stormwater runoff in Seattle - a result of rising urbanisation and sprawl - has caused water pollution and affected local freshwater ecosystems. Pilot projects have now replaced inadequate stormwater systems with monitored natural drainage systems. In addition, drainage fees to be charged to customers are based on parcel size and proportion of impervious land, and discounts will soon be given to customers who have private drainage systems on site. This case study demonstrates that it is possible to retrofit sustainable drainage systems into existing built-up areas, and that variable fees offer a useful fiscal mechanism to promote climate change adaptation.

ADDRESSING HEAT RISKS: MANAGING THE URBAN HEAT ISLAND (UHI) EFFECT IN TOKYO.

Temperatures in Tokyo have risen by 3°C over the past century. In response, the Tokyo Metropolitan Government (TMG) has produced a Thermal Environment Map to understand the factors affecting the city's UHI. A new policy makes green roofs a legal requirement for all new developments over a minimum size in the Japanese capital, and existing buildings must convert 20% of their rooftops. Green roofs provide multiple benefits in terms of addressing climate risks: they reduce stormwater runoff, provide cooling in the summer and thermal insulation in winter, as well as contributing to nature conservation objectives.

ADDRESSING WATER RESOURCES RISKS: WATER RESOURCE MANAGEMENT IN SINGAPORE.

Singapore is water-scarce not because of lack of rainfall, but because of limited land area to store the rainfall, making long-term water security an important consideration. Singapore is one of very few countries that manages supply and demand, wastewater and stormwater in tandem, with an emphasis on institutional effectiveness. The Public Utilities Board has developed separate drainage and sewerage systems to facilitate wastewater reuse on a broad scale. The reuse of wastewater forms 'NEWater', which is used for industrial and commercial purposes, even though it is safe to drink. Because its purity is higher than tap water, it is ideal for certain types of industrial manufacturing processes, like semiconductors which require especially pure water.

ADDRESSING LAND STABILITY RISKS: MANAGING COASTAL EROSION IN THE ISLE OF WIGHT.

The Isle of Wight Council has developed a Landslide Management Strategy in response to aggressive coastal erosion. The aims are to reduce the likelihood (and limit the impact of) future ground movement through the adoption of planning and building controls. This management of landslide hazards has involved the development of a contemporary ground behaviour model, based on geomorphological mapping, movement monitoring, site investigations, damage surveys, determination of past movement rates and a review of historical events.

A number of organisations are already producing research and practical solutions that show designers, planners, architects and developers how they can address the impacts. These include:

- The European Spatial Planning: Adapting to Climate Events



(ESPACE) project has focused on developing strategies for managing climate change and water management risks to spatial planning across Europe. ESPACE is evidence based and will recommend how climate risks can be incorporated within spatial planning mechanisms at local, regional, national and European levels.

- The London Climate Change Partnership has published a report on how major international cities are managing climate risks, 'Adapting to climate change: Lessons for London'. It provides examples highlighting ways that higher temperatures, increasing flood risks and greater pressure on water resources can be effectively managed.
- The Mayor of London is preparing a Climate Change Adaptation Strategy for London, the first for a world city. The adaptation strategy will provide strong policy directions on flood risk, water resources and managing the Urban Heat Island (UHI).
- The City of London Corporation is currently developing a Climate Change Adaptation Strategy. The strategy will describe the expected impacts of climate change on the City of London's infrastructure and services, make recommendations for adaptation actions and provide checklists for City of London staff and developers to factor climate change into policy-making and decision-making.

WE HAVE A CHOICE

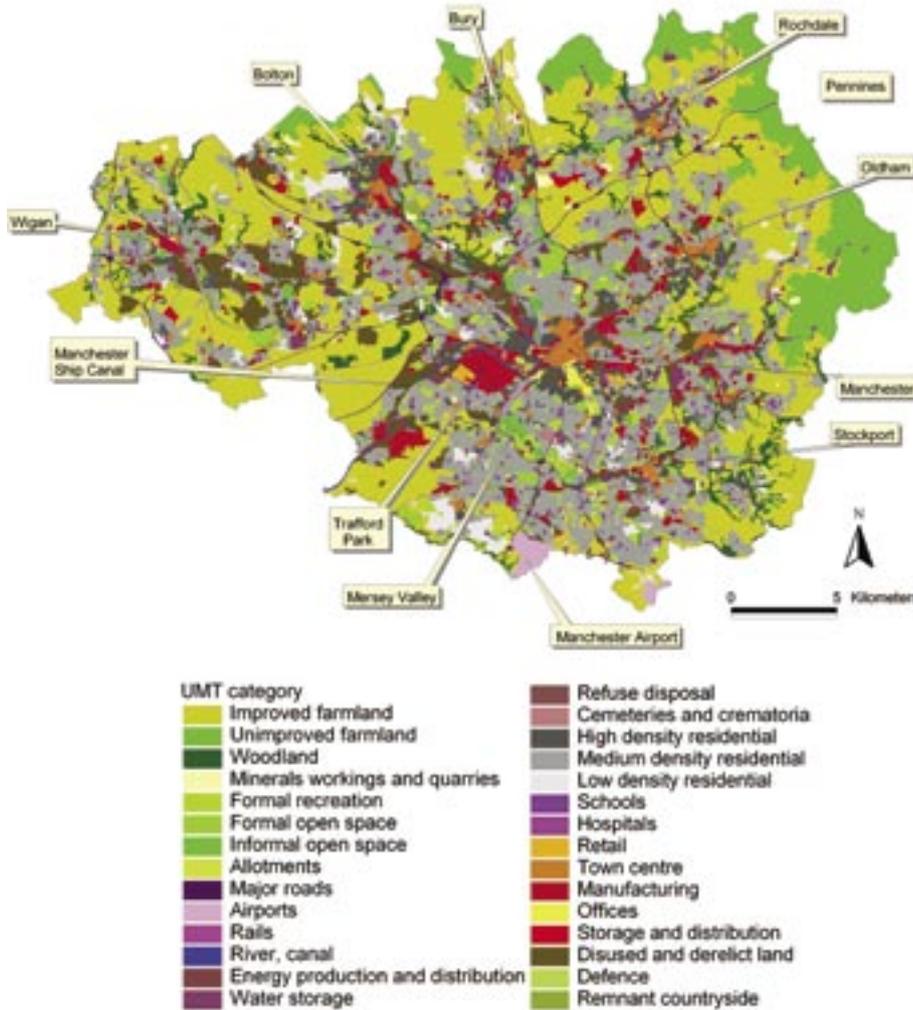
Every design adopted, planning permission granted or consent issued that does not recognise the impact of climate change is unsustainable. A decision made today that does not take climate change into account is both a lost opportunity and a constraint on future generations.

Michelle Colley is a Risk Manager at acclimatise, a consultancy managing business risks from climate change

Above Hammarby Sjöstad, Stockholm, an environmentally conscious neighbourhood
Photograph: Sebastian Loew

KNOWING YOUR CITY

John Handley, Susannah Gill and Sarah Lindley describe urban characterisation as the basis for climate change adaptation



Left The UMT map of Greater Manchester

- Opposite page from top to bottom
- Evapotranspiring surfaces in Greater Manchester
 - The different surface cover types
 - Maximum surface temperatures
 - Reducing temperatures by adding just 10% more green cover

Much of the emphasis in planning for climate change is focused on reducing greenhouse gas emissions, but climate change is already with us and its impacts are evident in towns and cities. This is because the distinctive features of the urban ecosystem are amplified by climate change impacts. In order to adapt for climate change at a conurbation level it is crucial that the character of urban areas is understood, and this article presents such an approach for Greater Manchester and its applications.

URBAN CHARACTERISATION

There are two stages to urban characterisation: urban morphology type (UMT) mapping and surface cover analysis. The UMT mapping stratifies Greater Manchester into 29 distinctive categories; areas were digitised from 1997 aerial photographs and each was assigned to one of the morphology categories; this UMT map was then verified by the Greater Manchester authorities. Our results show that approximately 40% of Greater Manchester is farmland and 60% 'urbanised' area, with residential areas accounting for almost half of the 'urbanised' area.

The UMTs indicate areas that are built or vegetated but there are variations within these; surface cover is crucial for determining the environmental performance of an area, including its surface temperature and rainwater runoff, and so an analysis was undertaken by aerial photograph to classify these areas into nine surface cover types. On average 72% of Greater Manchester, or 59% of 'urbanised' Greater Manchester, consists of evapotranspiring (i.e. vegetated and water) surfaces, and there is considerable variation between the areas; town centres having 20% evapotranspiring cover and woodlands 98%. The surface cover within residential areas is particularly important as approximately 40% of all evapotranspiring surfaces in 'urbanised' Greater Manchester occur here, with medium density residential areas accounting for the majority of such surfaces.

CONURBATION SCALE RISK ASSESSMENT

The Construction Research Innovation Strategy Panel (CRISP) has emphasised the need to identify the most vulnerable sectors and geographical areas. The three key issues highlighted by CRISP were coastal and riverine flooding; subsidence, wind and storm damage; and the impacts of warm summers on thermal comfort. Our principal interest here is in the ecosystem services provided by 'green infrastructure' in moderating climate change impacts.

EXPOSURE UNIT	HAZARD	ELEMENTS AT RISK AND ASSOCIATED VULNERABILITY
Built environment	Flooding, geohazards (e.g. landslides, clay soil)	Density of built environment, key infrastructure and services
Urban green space	Drought (available water content), runoff, temperature	Key green space infrastructure such as parks, gardens, density of trees
Human comfort	Temperature and precipitation	Receptive environments, associated with shoppers and commuters
Human health	Temperature (day and night maximums)	Population density and characteristics

The project adopted a common risk management framework and a consistent approach, where:
 Risk = f {Hazard, Exposure, Vulnerability}

The advantage of this approach is that adaptation strategies can be devised which reduce risk by either reducing exposure or vulnerability. In Greater Manchester, priority themes for risk assessment were established with local stakeholders: We have developed ways of connecting high risk zones identified by the risk screening to more fine-grained analyses at the neighbourhood level. Environmental hazards do not respect boundaries: we strongly advocate conurbation level risk screening as the starting point for developing a climate adaptation strategy.

ROLE OF GREEN SPACE

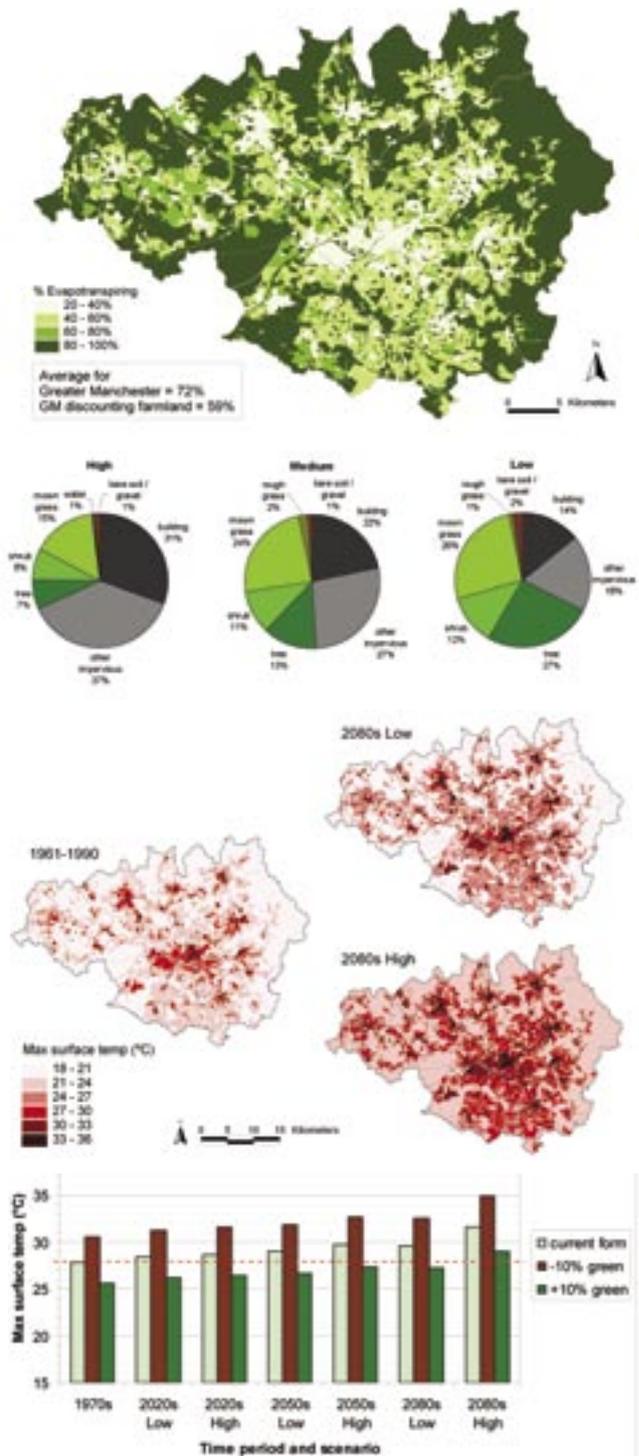
Another facet of this project modelled surface temperature and surface runoff in relation to green space cover to explore its potential in adapting cities to climate change. The UMT mapping provided the spatial basis with current form as the baseline (1961-1990) and future climates. The green cover was then altered to explore adaptation strategies and current development trends.

Urban green space plays a major role in moderating surface temperatures. The coolest areas have the highest green space cover and vice versa: adding 10% green cover can keep maximum surface temperatures in high density residential areas and town centres at or below the 1961-1990 current level until the 2080s, though in cases of drought, the evaporative cooling effect is reduced.

There is also less surface runoff from UMTs with higher green space cover; soil type is important with runoff reduced from sandy, rather than clay soils. By the 2080s High scenario, a once per winter daily downpour has 56% more rain than in 1961-1990, resulting in 82% more runoff from Greater Manchester. Whilst adding green cover will reduce runoff locally, this effect cannot offset the extra and extreme rainfalls. Adding 10% trees to residential areas reduces the total Greater Manchester runoff in the 2080s High by only 2%. There is consequently a need to increase storage alongside green surfaces, in order to respond to the increased runoff anticipated.

CONCLUSION

The urban characterisation presented here provides the foundation for the ASCCUE project and the UMT mapping forms the spatial framework for the conurbation scale risk assessment and green space modelling work. Commercially available NLUD maps are now emerging for use by local authorities and others. Our research has shown how information generated from even simple spatial risk assessments can help inform strategy at a variety of scales, and climate change brings opportunities as well as problems, especially in the public realm. An excellent example is the potential for storing excess winter rainfall to irrigate



green space, maintaining its cooling potential during future summers. This can only happen if the usefulness of the 'green infrastructure' is protected and enhanced and measures are taken to improve its resilience during the development and redevelopment process.

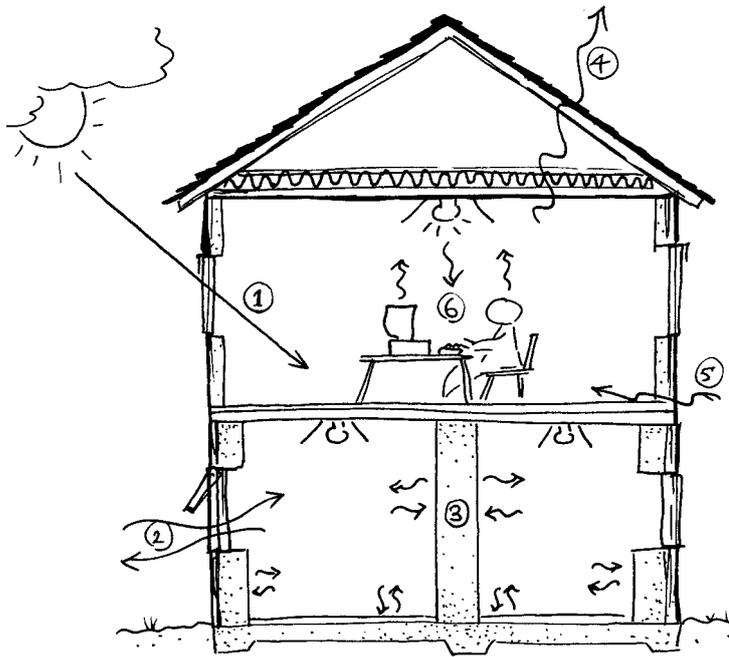
John Handley is Professor of Land Restoration and Management, Sarah Lindley is a lecturer in Geography at the School of Environment and Development, CURE, University of Manchester and Susannah Gill is Green Infrastructure Planning Officer at The Mersey Forest.

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BEATING THE HEAT

Anastasia Mylona describes strategies for keeping buildings cool



Overheating buildings and the associated thermal discomfort for people will be an increasing problem with climate change in the UK. In the last few decades, summertime temperatures have increased, with temperatures over 30°C now common in South East England. While some effort can be made in the design of new buildings to take account of future climate changes, the majority of UK buildings are already built and are likely to be used for several decades to come. A major concern is that occupiers of these will rely on inefficient air conditioning systems to beat the heat. This will increase energy consumption and the carbon dioxide (CO₂) emissions that are already causing climate change. Buildings currently account for around 50% of national CO₂ emissions and so it is critical that low-energy solutions are found.

Passive design principles can be used for low-energy consumption buildings to control natural heat flows for self heating or cooling of the building. The most successful passive cooling adaptation options are shading from the sun, controllable ventilation day and night, heavier weight building materials coupled with night ventilation, insulation and air tightness.

WORKING ON 'BEATING THE HEAT'

To assess the performance of both mechanical and passive cooling options, detailed weather information is used,

and currently this information is provided by the Chartered Institution of Building Services Engineers (CIBSE) in the form of graphs and tables of 'weather years' for three locations: London, Manchester and Edinburgh. The type of weather year used to assess overheating risk is called a Design Summer Year (DSY) which is a representative of warm summers in the climate of the 1980s. However, the climate has become warmer since then and the DSYs currently used by building designers do not take into account potential future climate warming. With UKCIP's forecasts that peak summer temperatures could be up to 7°C warmer than today by the 2080s, and future predictions revealing that variations will exist across the UK, designers should acknowledge both these spatial and temporal variations when considering the cooling needs of a building.

Six case studies representing much of the current UK building stock were therefore examined using dynamic thermal modelling to assess the effect of climate change on buildings, the frequency of overheating, energy consumption and carbon emissions. In each case, the models were run for the baseline 1980s as well as the 2020s, 2050s and 2080s. For each case study, the building was modelled in two different ways: 'as built' represents the building as originally designed and currently used; 'adapted' represents the building as it could be when adapted to improve its performance.

The case studies examined were a nineteenth century house, a new build house, a 1960s built office block, a new naturally ventilated office, a 1960s built school, and a new naturally ventilated school; two are summarised here.

THE NINETEENTH CENTURY HOUSE AS BUILT

Found in many UK cities and towns, this is a semi-detached four bedroom family house. It is poorly insulated, with solid brick wall construction and single-glazed windows, while ventilation is provided by opening windows and heating by gas-fired central heating. There is no mechanical cooling system. The results showed that the 'warm' and 'hot' discomfort temperatures are often exceeded during the summer, throughout the twenty-first century, mainly due to the building's lack of shading from the sun and poor control of ventilation. Energy consumption for heating is relatively high due to poor insulation and air tightness. As there is no cooling system in the building, the source of CO₂ emissions is mainly from heating, which reduces as external temperatures rise.

ADAPTED

The same building was modelled again but this time with solar shading and mechanical ventilation added to the model. The adaptation measures considerably reduced the proportion of hours in which the discomfort temperatures are exceeded. However, the overheating limit would still be exceeded from the 2020s onwards in the bedroom and from the 2050s in the living room. There was an increase in energy use and carbon emissions due to the use of mechanical fan ventilation. The house was also examined with the use of air conditioning; in this scenario the temperatures were kept below the 'hot' threshold but with an increase in the total CO₂ emissions from the building.

In summary, the effective adaptation measures for retrofitting this type of building are shading from the sun capable of screening out 95% of sunlight, and mechanically induced ventilation or natural ventilation.

NEW NATURALLY VENTILATED OFFICE

AS BUILT

This case study is a medium sized three storey office building with passive features such as shading, natural ventilation and thermal mass. The building has good insulation and air tightness. Heating is provided by gas-fired central heating, while ventilation and cooling are provided through passive means. The design comfort target is met in the 1980s but thresholds would be exceeded by the 2050s, with a large variation between the ground and top floors. Carbon emissions are mainly the result of energy used for IT and lighting, while considerable energy is needed to heat the high thermal mass to room temperature and deal with the draught rates assumed for the winter months.

ADAPTED

In the adapted building model, a thermally heavyweight roof structure and mechanical cooling using chilled beams were added in order to optimise the thermal performance of the top floor. The adaptation strategy was effective in keeping space temperatures below the ‘hot’ threshold, without a large increase in energy use because of good passive features and low energy demand for cooling. The effective adaptation measures for retrofitting these types of newer buildings that already incorporate passive features are thermally heavyweight structures and energy efficient cooling systems (chilled beams and surfaces).

SPATIAL VARIATION

However, the climate in Manchester is currently significantly cooler than in London and this will continue to be the case under the climate change scenarios; thermal discomfort will therefore currently be less of a concern. However by the 2050s, levels of thermal discomfort in buildings in Manchester are likely to be similar to those in London in the 1980s. The climate of Edinburgh is cooler still and no significant occurrences of thermal discomfort were found in the case study buildings until the 2080s.

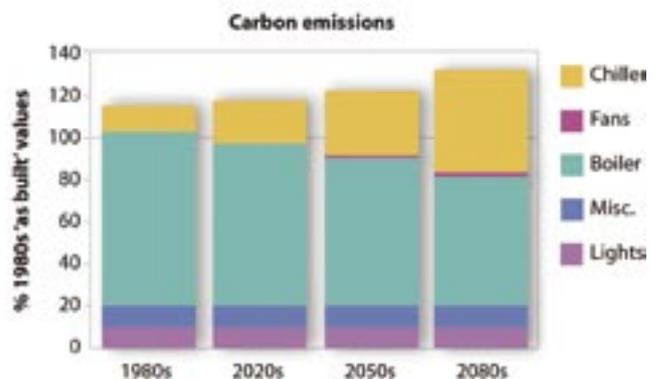
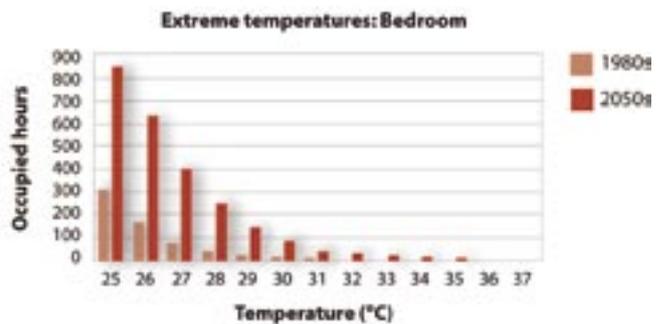
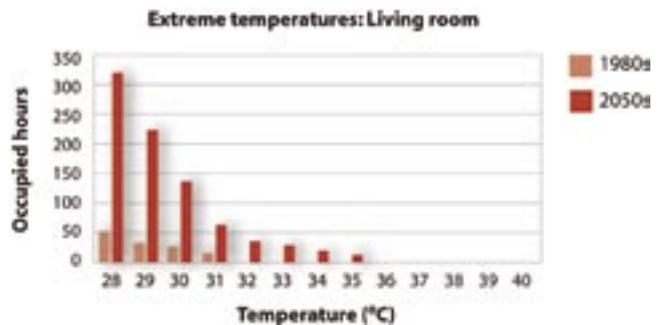
CONCLUSION

The study described in this article demonstrates that effective strategies do exist for dealing with climate change in the UK. However by the 2050s, in the south and south east of England such strategies will be insufficient, making it increasingly difficult to modify existing buildings to adapt to climate change; as a result many of them will be vulnerable to high levels of thermal discomfort and possible heat stress risks. Even with the suggested adaptation methods, energy use is greater than is desirable. The challenge that therefore lies ahead for the designers is to continue to adapt existing and recent buildings to provide comfortable environments for the occupants as weather conditions change, while reaching global CO₂ emission targets and mitigate climate change.

Anastasia Mylona is a Knowledge Transfer Partnership (KTP) Associate, managed by UKCIP and CIBSE

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For more detail on the other case studies see *Beating the Heat: Keeping UK Buildings Cool in a Warming Climate* (2005) by J N Hacker, S E Belcher and R K Connell, UKCIP Briefing Report, UKCIP, Oxford
 CIBSE TM 36 is known as *Climate Change and the Indoor Environment: Impacts and Adaptation* (2005), by J N Hacker, M J Holmes, S E Belcher and G Davies, Chartered Institution of Building Services Engineers, London



Opposite page Schematic heat flows

Above from top to bottom

One of the six case studies

The difference in extreme temperatures between the 1980s and 2050s for the living room and bedroom
 The carbon emissions for summer time, which are far higher if chillers are relied upon for cooling

ADAPTABLE URBAN DRAINAGE - AUDACIOUS

John Blanksby describes the project Addressing Change In Intensity, Occurrence And Uncertainty of Stormwater

This cheekily named project involves some good new science and has contributed a better understanding of how local drainage (from roof to main drainage or river) really works. The boundaries are fuzzy and depend on local circumstances, but the target audience is the people who own, commission, plan, finance, design and build at a local scale, rather than the water companies, authorities or the Environment Agency.

Conceived five years ago, AUDACIOUS is part of the Building Knowledge for a Changing Climate (BKCC) research portfolio. At the time of writing, the team which includes Heriot Watt, Aberystwyth, Bradford and Sheffield Universities, Imperial College London and the Centre for Ecology and Hydrology has not yet delivered its final outputs, namely a handbook for our target audience, and a more detailed document setting out the science for engineering specialists.

One of the reasons for the delay is that our work has been overtaken by events: Foresight Future Flooding (Evans 2004) which highlighted the potential national costs of different climate change and socio-economic scenarios - demonstrating that the right responses could significantly reduce costs, kick-starting the development of a national strategy. Defra has taken this forward as 'Making space for water' (2004). Following consultation, a portfolio of research projects on flood risk management has ensued with 15 pilot projects addressing problems at different scales and levels of stakeholders involvement; in addition to the new Planning Policy Statement (PPS 25) Development and Flood Risk (2006), and the Planning Policy Statement on Planning and Climate Change. (2006).

The EPSRC has also funded research into the development of risk assessment methodologies, decision-supporting tools, public health impact assessments, and building drainage. However, the publication of PPS 25 is a milestone, and provides a breathing space for the AUDACIOUS reports to be finalised.

WHAT IS FLOODING AND WHAT CAUSES IT?

Flooding is just water in the wrong place. It is as simple as that, and in nature water is always where it is meant to be, so the only possible cause of flooding is human activity. Even in the desert, where flooding is said to be a

larger cause of death than thirst, it is not flooding as such, but people pitching camp in wadis to shelter from the wind and on occasions suffering the consequences. It is a matter of risk management, and no doubt, the indigenous population are well aware of the risks. Similarly, if someone wants to live or own a property on a flood plain, they must want to take or accept the risk - there can be no other reason. The bigger problems start when other people's actions increase the extent of the flood plain or the probability of flooding, as this changes the original risk and cannot be acceptable to those nearby with properties at risk. It is unlikely that the people taking more risky actions are acting out of malice - the reasons are more likely to be a lack of understanding. If that is what causes flooding in terms of rivers and flood plains, let us look at it from the urban perspective or the vast urban areas not in a flood plain to begin with.

A farmer builds a house close to, but not in the valley of a small stream. There is no way that it will flood. Over the years, the farmer, whose land the stream runs through, decides that he can improve the productivity of the land if he lays a small pipe and fills over the top of it; and it doesn't matter to him if the pipe capacity is occasionally exceeded and the water flows over his land, as the water is still contained in the valley and his house is safe. Over many years, the land changes hands, and eventually a housing development is built. The stream is re-routed, and because there hasn't been any significant rainfall for years and the original pipe was quite small, the new relocated pipe isn't any bigger or big enough, but no one knows it yet. Gradually the valley is filled in further - its 'capacity' is lost and the old farmhouse is now becoming more vulnerable.

As more time passes, land at some considerable distance and on the other side of the stream is developed, but the new developers have built sewers and made sure that when the sewer capacity is exceeded, the water runs away. Eventually by a process of urbanisation, the farmhouse is not just in a low spot, but the surface flows are routed directly to it via the roadways. There is nowhere else for the water to go because the stream valley has been filled in, so when the capacity of the sewers and the stream culvert is exceeded, the culvert gets flooded. But it gets worse than that.

Even though the design capacity of the sewers was for rainfall with a probability of occurrence once in 30 years, the rainwater runoff has increased. This is because householders have paved over their gardens for car parking and patios, and infill development has taken place in the gardens of some of the larger properties - none of this could have been accounted for when sewer improvements were made over 20 years ago. Of course, the works took account of the policies of the day, but they just didn't understand the full extent of urban creep (or intensification as it is known).

No one wanted to cause the farmhouse to flood, but all the people who benefited from the diversion and culverting of the stream course, the filling of the valley, the new houses, the patios and the highway improvements have all contributed to the flooding. But it is no consolation to the present owner of the farmhouse to know that no one meant it.

This tale has many variations - in some cases the stream courses have been subsumed into the sewer system, and this is the landscape that we have now - a landscape of formal piped drainage systems with limited capacity and an informal network of surface pathways. The pressure on the system will increase as assets age and deteriorate, people increase the impermeability

of surfaces, and the changing climate increases the intensity and volume of rainfall. PPS 25 sets out to address these issues and identifies that permitted development rights may be removed where this is appropriate.

SOCIO-ECONOMIC PRESSURES

Current and likely global energy use means that greenhouse gas emissions are likely to go beyond even the highest socio-economic and emissions scenarios that we have been offered. By the time that oil, gas and coal eventually run out, there will still be an awful lot of damage done. What this means is that we must be prepared for the worst, and this means changing the way that we do things.

At this point it is worth pausing for a reality check: at current rates of expenditure it will take 400–500 years to replace all of our existing 75-100 year old sewers. If we want to do that within 80 years (by UKCIP's 2080 time line), expenditure on sewer replacements will need to increase five or six fold, but without increasing real capacity. This would result in an immediate increase of 150 – 200% in water charges, let alone expenditure on water resources and additional energy costs. Clearly this is not going to happen, and so we will need to manage more water, at source or on the surface, otherwise water will go where gravity takes it.

THE AUDACIOUS APPROACH

In order to make decisions about water at the local level, we need to know how our drainage systems work at a larger scale. Water companies already have a good picture of how their sewers currently perform and so it is not too difficult to assess how they will perform with increased rainfall and additional development. This can also be done for SUDS and local watercourses, but these are not already part of someone's duties or powers.

Hopefully when the 'Making space for water' projects have run their course and appropriate decisions have been made, the water companies and other drainage authorities will be able to tell spatial planners how many litres per second per hectare can be added into formal drainage systems. Then, given an intensity and depth of rainfall to be managed, the amount of water that must be held locally or beneath the surface, can be determined by simple calculations. It is a simple sum and will allow us to agree whether we should allow water to pond in extreme conditions, within our urban areas and to what depths? The deeper the storage, the smaller the area.

The science that we have been doing as part of the AUDACIOUS approach, together with other projects, will help us to quantify the capacity of the formal drainage systems by improving our ability to model them. Using socio economic and climate change scenarios and perspectives on intensification, we can identify the increasing pressures on drainage systems and urban surfaces to make adaptation choices, so that money is not wasted by over-designing infrastructure or not making provision for future adaptation.

We will then be able to show people working at the local scale how the overall picture looks and their role in ensuring that 10 – 20% of the surface area of developments is used for water management during extreme weather.

John Blanksby is a Research Fellow in the Pennine Water Group, at the Department of Civil and Structural Engineering, University of Sheffield

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Top Roof water is discharged directly to the ground
Middle top There are no gulleys, just a central channel to convey the water, at Enschede, The Netherlands.
Middle bottom From there, the runoff from roads discharges into 'wadis'
Bottom The 'wadis' fill with water after extreme rainfall, and drain down quickly. Photographs: Waterschap Regge & Dinkel

PLANNING POLICY AND ADAPTATION TO CLIMATE CHANGE

Rob Shaw outlines new planning policy and the industry's tasks



Just as changes in the economy and social policy have over time, influenced the way towns and cities look and function, so climate change will alter them again. It will be a slow process as buildings aren't replaced very often, and whole neighbourhoods even less so. Change will start with new developments and regeneration schemes, which will gradually filter down to existing development.

The capacity of the built environment and professionals working within it to take these first steps has been helped significantly by a new raft of policy on climate change, launched by Secretary of State Ruth Kelly on 13th December: the new Planning Policy Statement (PPS) on Climate Change, the long-awaited Code for Sustainable Homes, and further consultations on translating Code standards into Building Regulations and water standards in new buildings. The implications for the practices of planners,

urban designers, architects and developers will be profound.

The new PPS (expected in March 2007 at the time of writing) will form a supplement to PPS 1, rather than a stand alone statement. This is crucial since its contents should be seen as part of the core principles of the planning system. The new policy guidance is the first comprehensive policy on tackling climate change through the planning system and is a very major step forward in how the system deals with the issue. In summary it seeks to:

- Make climate change a material consideration in all decisions and the planning process.
- Integrate reduction and adaptation strategies and provides for greater sensitivity to biodiversity issues.
- Require regions and local planning authorities to forecast emissions from new residential and commercial development.
- Enable planners to set interim targets where this can be evidence based and delivered through activities influenced by planning.
- Remove restrictions on developing low-carbon and renewable energy projects outside statutory designations.
- Retain and enhance a strong community voice in decision-making on climate change.
- Provide for local flexibility to promote innovation in climate solutions.

The other major announcement from Ruth Kelly was the new Code for Sustainable Homes, which sets out the ambition for zero-carbon residential development by 2016. The idea behind the Code, which is based on the EcoHomes/BREEAM framework, is to set a series of six standards to which industry can aspire. There are no equivalent standards for commercial or existing buildings, and this must be seen as a major omission. Minimum standards are set for energy, materials and water, all of which are set above current Building Regulation levels. It remains voluntary, but a consultation launched along with the Code sets out a time-line for incorporating specific Code standards into statutory Building Regulations – Code level three by 2010; level four by 2013; and level six (zero-carbon) by 2016. This clearly signals to industry the direction of travel.

While the industry has often expressed resistance to higher standards, it is interesting now that the volume house builders have largely embraced this agenda. They believe that they need 10 years to get supply chains and economies of scale to function properly. In reality it is likely that much faster progress could be made. And it may have to be if we are to meet the challenge set by the Tyndall Centre report of having all mechanisms in place by 2012 to reduce CO₂ emissions by 70% by 2030.

A BIG QUESTION IS - WHAT IMPACT ALL THIS WILL HAVE ON THE APPEARANCE AND FUNCTION OF THE BUILT ENVIRONMENT?

There is no doubt that there are real opportunities for planners and designers. However hotter, drier summers such as that in 2003 will result in more deaths through heat stress, and cities with their heat islands will be more unpleasant places to be for parts of the year. It will also mean changing relationships between indoor and outdoor spaces. Parks and gardens will get more use, and outdoor eating and drinking will become more popular, particularly in the evenings.

The job for urban designers is to minimise the risks, while maximising opportunities. It will require new thinking about how public and private open space and tree cover is used to maximise their cooling and shelter (from sun and winter wind) effects. Research carried out as part of the ASCCUE project points to the value of smaller open space close to buildings in fulfilling this function. Open space also helps to reduce the amount of water entering the drainage system. This will be invaluable in preventing local flooding since predictions suggest more frequent heavy rain storms. The possibilities for creating a high quality comfortable public realm, while contributing the comfort of those inside buildings, are enormous. Doing things the way we do them now will not achieve this.

Mediterranean countries deal with heat by painting buildings white to reflect the sun, creating narrow streets to provide shade and using shutters on the outside of buildings to keep out the sun. There are lessons here, but copying other countries will not provide the answers. The UK will continue to have colder, gloomier winters for the foreseeable future and so creating streets that are permanently shaded is unlikely to mean pleasant environments.

Further issues to consider are regional variations and the changing nature of climate change. Unlike southern England, serious overheating of buildings is unlikely to be a problem in northern England or Scotland until much later in the century, whereas coastal erosion is likely to affect the eastern side of the country more than the west. These scenarios, coupled with uncertainties as to the probable impacts, mean that flexible solutions unique to the UK or even to parts of the UK will be required. The TCPA has been working with a range of stakeholders to prepare a guide to help planners, developers and urban designers understand the issues. The guide – ‘Climate Change Adaptation By Design’ – will advise



on appropriate planning strategies and design solutions for particular climatic hazards.

The climate change challenge is hugely exciting and not beyond the capabilities of planners, designers and the industry. The prospect of urgently needed homes built to very high standards in attractive, climate-proofed communities should be one that everybody welcomes. Perhaps one of the most positive outcomes will be a clearer picture of how planning and Building Regulations work together to deliver low and eventually zero-carbon development. This agenda will take time to filter through the regional and local planning processes and for many local planning professionals, urban designers and the development industry to catch up.

Rob Shaw, Director of Policy & Projects, Town & Country Planning Association (TCPA)

BUILDING A LOCAL CLIMATE IMPACTS PROFILE (LCLIP) FOR YOUR COMMUNITY



Left An example of local media coverage of an extreme weather event on Oxford's ring road in 2006
Source: Televisual Library

The idea behind the Local Climate Impacts Profile (LCLIP) project is that organisations will have a better understanding of the relationship between weather, their locality and in turn how best adapt to the impacts of a changing climate.

The detailed content and format of a LCLIP should be determined locally, but typically contains information on:

- past local climate and associated impacts;
- current local weather and associated impacts; and
- longer term future climate (and potential impacts).

Ideally, information on current weather and impacts will be updated, so that systematic evidence of impacts over a recent period can be compiled.

There is a range of different intended uses and users for the LCLIP. These include:

- Elected members of local authorities, particularly those with responsibility for, or interest in, environmental/climate change agendas;
- Clients, sponsors, funding bodies etc for urban design projects;
- Interested members of the public (i.e. the electorate);
- Senior council officers including Chief Executives, Directors, and Department Heads; and
- Planning officers and developers in consideration of development proposals. (DEFRA and ODPM are already discussing the potential for a Local Climate Impacts Profile as part of the formal planning process).

WHAT MAKES UP A LOCAL CLIMATE IMPACTS PROFILE?

The information required for a local profile is place-specific so it is best assembled and managed locally to:

- provide a dynamic source of data on local weather, its impacts and local adaptation responses;
- stimulate local awareness of climate impacts and their consequences; and
- assist in the development of local proposals for adapting to the expected local weather conditions.

The Local Climate Impacts Profile (LCLIP) will provide 'evidence' for a local community to engage with the threats and opportunities presented by climate impacts in the local area. The impacts of climate change on a local community depend on two rather different things:

- local characteristics - geology, topography, economy, built environment and infrastructure, emergency preparedness, etc. (this is sometimes represented as 'local vulnerability'); and
- local weather and climate - including the typical average climate as well as variations and extreme events of rainfall, temperature, etc. (meteorologists define climate as the average weather in a given locality over a 30 year period).

The LCLIP will bring together data on weather and its consequences particular to a locality, from a variety of sources, and cover the consequences of weather events and the ways in which the local community has responded. This information has already been a genuine catalyst to action in councils responding to threats and opportunities.

HOW BIG AN AREA IS 'LOCAL'?

By definition a LCLIP relates to a specific locality – this might be part of a district council or a London borough, or the more extensive area covered by county councils or the unitary authorities in Wales and Scotland. These various spatial scales are appropriate for consideration of a local climate, but it is preferable to assemble a LCLIP for a smaller area, such as a district or a county. Of course, it could also be done for an individual project site or the location of a new settlement or urban extension.

WHERE CAN USEFUL DATA BE FOUND?

Although much of the information needed for a LCLIP is freely available from websites, there is no single agency nationally that can assemble a LCLIP for your locality. We anticipate local councils to take ownership of a LCLIP for its locality, and therefore co-ordinate and manage the necessary data collection, storage and retrieval. But this will not need a large resource commitment – just a little enthusiasm from the local community. Two different sources of information are envisaged:

1. electronic information: information on both historic climate patterns and future climate scenarios is available electronically, and both types of data can now be selected and down-loaded with reference to a particular location. Historic data can be found on the website of the UK Met Office (www.metoffice.com) and future scenarios on the UKCIP website (www.ukcip.org.uk). Furthermore, there is also some Met Office electronic data on the impacts of extreme weather events in the recent past which can be identified by location.

2. ‘journalistic information’: the consequences of extreme weather events are always reported by local newspapers, radio and television. There are also the records of local authority service departments – e.g. when did the parks department start and finish its mowing regimes over recent years and how did this vary according to the weather conditions? What weather conditions required gritting lorries and snow ploughs to be used to maintain transport routes? Record keeping will vary from one council to another, but it is possible to extract data from relevant departments.

WHO WILL HOST IT?

The LCLIP is intended to be hosted by a local council and there are several departments that may be appropriate to take on this role. These are likely to be those that:

- have a strategic or management role in developing strategies to adapt to climate change: e.g. the planning department or the sustainable development unit;
- are sensitive to weather events and perhaps already have a system in place for collecting weather related records: e.g. the environmental health department, the tourism unit, the parks and gardens department or the highways department; and
- have responsibility for managing data generally: a unit that operates a Geographical Information System (GIS) database.

It can also be useful for this to be done by a local college or university, an environmental, planning or design practice with an on-going local interest.

THE BENEFITS

Building a Local Climate Impacts Profile will offer several benefits including:

- a record of current weather related events specific to a particular locality;
- a record of the actions taken in response to current local climate impacts and the effectiveness of these actions; and
- making the longer-term and far broader data presented in the UKCIPo2 climate scenarios much more relevant to a particular place, and prompting ‘climate proofing’ action.

NOTTINGHAM DECLARATION ON CLIMATE CHANGE AND ACTION PACK

NOTTINGHAM DECLARATION

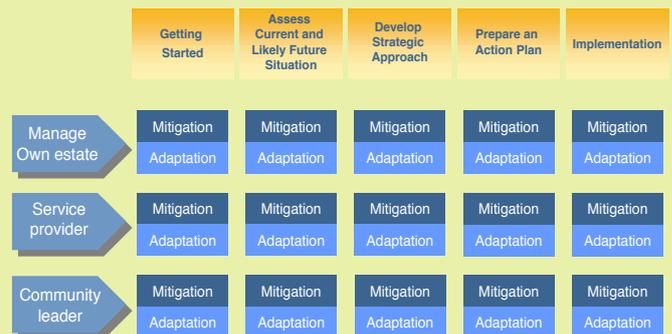
Clearly local authorities have a crucial role to play in responding to the challenge of climate change, both in adaptation and mitigation. The scale of the challenge means that all sectors of the community have to be involved if we are to meet targets for reducing emissions and adapting to climate change.

An important initiative has been spreading whereby local authorities can show their commitment to this important issue by signing The Nottingham Declaration on Climate Change. By signing up, the local authority pledges to actively tackle climate change in their area and work with others to reduce emissions country-wide. There is considerable scope for planners and urban designers to contribute to this process both at a strategic level and through detailed design.

So far, over 200 local authorities have already signed the declaration in England, as well as all the councils in Scotland and Wales. We would encourage you to check if your local authority is already committed in this way, and encourage them to do so if not.

NOTTINGHAM DECLARATION ACTION PACK (NDAP)

The Nottingham Declaration Action Pack (NDAP) is a new resource designed to support local authorities in addressing climate change in the UK. It explains how a local authority can reduce emissions of greenhouse gases and adapt to the climate changes already underway.



The Pack provides detailed guidance for each of the 5 project management stages required to develop an Action Plan. It will help support a council’s work on its own estate and corporate functions, the service areas that it provides and in its role as community leader. The diagram illustrates the various stages of development, and it can be used to project manage the production of an Action Plan for Climate Change as well as a framework for monitoring progress and achievement in the authority.

A CHECKLIST FOR DEVELOPMENT ADAPTING TO CLIMATE CHANGE

This checklist is designed to highlight to developers, their design teams of urban designers, architects, investors and policy makers the need for developments to be 'climate proof' in their design. Although produced with the South East of England in mind, a large majority of the messages are applicable throughout the UK.

The key issues that have been explored in detail in this issue are summarized in the checklist below. They represent aspects that need to be considered when 'climate proofing' development against the impacts of climate change, with suggestions as to how some of these might be achieved.

LOCATION

Establish the Environment Agency flood risk designation(s) for the site and ensure that the design of the development accords with it.

Check the Environment Agency's Flood Map resource at www.environment-agency.gov.uk/subjects/flood/826674/829803

Check with the Local Planning Authority to review any strategic flood risk assessments.

Undertake an appropriate flood risk assessment and evaluate the flood risk over the design life of the development. Demonstrate that this is acceptable for the proposed uses and, at a minimum, that there will be no overall increase in flood risk (likelihood and negative impact).

Consult the insurance industry guidance Strategic Planning for Flood Risk in the Growth Areas – Insurance Considerations about the viability of the development for insurance purposes.

Help reduce the urban heat island effect e.g. by planning green space and using appropriate shade when locating your development.

Consider the implications of coastal erosion when planning a development.

SITE LAYOUT

Ensure the overall layout and massing of the development:

- does not increase the flood risk and where possible reduces risk;

- minimises solar gain in summer;

- maximises natural ventilation;

- maximises natural vegetation;

- takes account of the increased risk of subsidence;

- provides homes and other appropriate uses with a private outdoor space wherever possible.

BUILDINGS

A: STRUCTURE

Demonstrate the structure is:

- strong enough or able to be strengthened if wind speeds increase in the future due to climate change;

- strong enough to avoid movement due to expected future levels of subsidence and heave;

- able to incorporate appropriate ventilation and cooling techniques/mechanisms;

- of an appropriate thermal mass for the intended use and occupancy.

B: PHYSICAL ENVELOPE OF STRUCTURES

Demonstrate the envelope of the building is designed so that:

- drainage systems and entrance thresholds can cope with more intense rainfall;

- there are opportunities for incorporating green roofs or walls;

- the exterior of buildings reduces heat gain in summer;

- the overall envelope avoids infiltration from increased wind and temperatures;

- cladding materials are able to cope with higher wind speeds.

C: MATERIALS

Ensure the materials specified will perform adequately in the climate throughout the lifetime of the development.

Ensure the construction methods to be used are suitable for the weather conditions at the time of construction.

VENTILATION AND COOLING

Ensure that ventilation brings clean pollution-free air into the building and does not compromise noise levels or security.

Demonstrate the building has or is capable of having installed a ventilation system which will deliver comfortable temperatures (i.e. exceeding 28°C for less than 1% of the time and exceeding 25°C for less than 5% of the time) for the expected climate throughout the design life of the development.



Discuss existing sewerage infrastructure and sewage treatment capacity with the local sewerage provider.



Cooling and ventilation systems, where necessary, should be designed to use as little carbon-based energy as possible by utilising renewable energies and being as energy efficient as practicable.



Regarding water use, for housing, achieve a target of 30 cubic metres per person per year under typical use and for offices, 1.05 cubic metres per person per year.



Minimise water use in buildings, consider the use of rainwater collection/re-use systems and consider the environmental impact (in terms of water consumption) of products, materials and building methods.



DRAINAGE

Carry out a site survey to determine which SUDS techniques will be appropriate for use on the site. For example, ground conditions will determine the suitability of infiltration systems. Consider rainwater harvesting, green roof systems and opportunities for permeable paving if soil permeability is low.



OUTDOOR SPACES

Incorporate an appropriate range of public and private outdoor spaces in developments, with appropriate shade, vegetation and water features.



Ensure the design of surfaces take account of more intense use, permeability, potential for causing dust and for soil erosion.



Ensure, in consultation with the Environment Agency, that the requirements of the Groundwater Regulations are complied with (you should though note that shallow, extensive infiltration systems will minimise risks to groundwater).



Ensure the selection of vegetation with longer life (over 10 years) takes account of future climate change.



Ensure water features have minimal net water use.



Demonstrate consideration is given to future maintenance requirements of SUDS including the need, where necessary, for the removal of silt which will be treated as a controlled waste, and that space requirements for this purpose are allowed for in the design.



Provide a rainwater collection system/grey-water recycling for watering gardens and landscaped areas.



Ensure there are arrangements for storing waste which allow for separation and prevent excessive smell in hotter conditions.



Ensure that responsibility for maintaining SUDS is clear at the planning application stage.



CONNECTIVITY

A: INFRASTRUCTURE RESILIENCE

Ensure there are safe access routes above the likely flood levels and the routes are clearly marked (e.g. by a series of poles) during the design life of the development.



Consider using permeable paving anywhere that loadings will not cause structural failure. In practice, all pavements, driveways, footpaths, car parking areas and access roads could have permeable surfaces.



Negotiate with utilities and others over the resilience of services and infrastructure to the development.



In developing the drainage plan for the site, ensure that the design standard takes account of climate change and that carriageways, paths and other features of the site are designed to convey this excess flow safely.



B: IMPACT ON NEIGHBOURS

Identify immediate neighbour impacts as well as the cumulative impacts and the increased demands on services.



WATER

Estimate the net water consumption of the development under normal use and under water conservation conditions (i.e. during a drought), both initially and during the lifetime of the development in consultation with the relevant water company.





Woolwich Town Centre

David Cafferty and Richard O'Neil describe proposed Civic Offices at the new heart of Woolwich town centre

The London Borough of Greenwich has submitted the new £45 million Civic Offices in Wellington Street, Woolwich, South East London for detailed planning consent and the scheme has been designed by HLM Architects.

A STRATEGIC VISION

The Civic Offices project is a pathfinder scheme, which responds to the Government's 'better ways of working initiative' and its new strategies to drive the 'joined-up' delivery of public services, with improved efficiency in the utilisation of space, operations and working practices. It addresses the Government's initiative to create value from local authority's operational assets through rationalisation and restructuring. The scheme is part of a broader vision for the regeneration of Woolwich town centre; the first part of this ambitious master plan spanning eight acres will ultimately create a new extension to the retail heart for Woolwich, including a Tesco store and approximately 900 new homes, confirming the area as a key part of the wider Thames Gateway regeneration initiative.

THE OVERARCHING DESIGN SOLUTION

The 20,500 sq m Civic Offices has been designed to enable the consolidation and improved delivery of the council's public service and operations, creating both an efficient scheme and a new civic quarter for Woolwich, and fostering a sense of pride among the community. Sustainability has been a major driver, influencing the design to enhance its operational efficiency over the whole life-cycle of the building. Mixed-mode environmental engineering will reduce carbon consumption by 50% relative to accepted best practice. This is further

supplemented by photovoltaic panels for significant renewable energy provision. It is also intended that the scheme will later be linked with a tri-generation CHP station providing the opportunity for the use of bio fuels.

THE CHALLENGES

There are a series of complexities inherent in a project like this not least because the Civic Offices scheme had to complement an evolving master plan. Therefore, not only did we need to meet users' and stakeholders' requirements through extensive consultation and continual liaison, but we also needed to respond to the need to create high quality streets and places, reinforcing the range of uses proposed around the entire site.

The building's orientation was pivotal. We provided an entrance to the library on the lower level of the site which gives access to the planned new retail square, and another entrance to the main building opposite the historic Town Hall to emphasise the heart of the new civic quarter. This was largely achievable because the site slopes by one storey height across its length, and in itself presents a series of technical challenges.

Creating a civic quarter relies on respecting and the enhancement of the historical context. As a result, the form and massing of the new civic offices work to respect the scale and setting of the Grade II listed Town Hall building. Simple yet elegant facades combine masonry and glass to reflect values of open governance, local culture and civic pride; while contemporary detailing supports the implementation of the overall environmental strategy for the building. It was important to acknowledge the role of the Civic Offices in shaping the heart of



Opposite page The front of the new civic offices in Woolwich town centre
Above The new civic space linking new and old

the civic quarter in conjunction with the Town Hall, to engender pride within the community and enhance social inclusion. By creating a new civic space between the two buildings, a new public square will connect the old and new buildings and provide a community space and focus.

A MULTI-FUNCTIONAL BUILDING

The primary focus of the Civic Offices is the delivery of public services as well as expanded community facilities, which include a reception, public library, services centre, a business centre and community gallery. In a building with such extensive public access (in its widest definition), the design needed to cater for all social and ethnic groups, as well as the disabled and all age groups in terms of social inclusion and accessibility.

By using architectural forms, supported by palette of colours, textures and contrasts, the different functions of the building are distinguished, ensuring that way-finding is clear. The main entrance and the use of glass give a sense of transparency, providing a clear visual route through the building, as well as turning the entrance space back towards the Town Hall.

The 'better ways of working initiative' relies on an open plan, efficient environment, first and foremost, and staff embracing an unfamiliar working environment as part of a culture change. Providing four workstations per five staff members takes into account flexible work patterns and home-working, supporting maximum space utilisation. A combination of mobile and fixed storage systems gives staff access to their belongings when necessary, and the centralisation or localisation of filing has been carefully considered to ensure efficiency. The IT infrastructure has also been designed to support flexible working, and maximum space efficiency.

The local services centre provides an extensive range of services to the public and visitor points are organised depending on the length of time an individual consultation is likely to take. The design provides

four modules of public interface – finance, general, environment and life – in order from the point of entry. Thus the longer the 'dwell time' is likely to be, the further into the building each interface module is located. This secures privacy for people dealing with more sensitive issues by ensuring that the larger traffic flows are contained near the entrance.

Shaped through extensive consultation, the library has been benchmarked against the best libraries in the UK and provides a contemporary facility that can engage each member of the community in all age groups. Different themes and colours distinguish the areas and the music library adds further variety to the services that are provided.

The business centre is shared by the meeting requirements of the Civic Offices itself and the public, who can hire business space and meeting rooms. The centre is spread over three floors to maximise shared usage and, therefore, revenue generation for the council.

A 'community' gallery provides a public space at the top of the building, with extensive views over Woolwich and towards London. It is designed to take full advantage of the relationship with the new civic quarter and the existing Town Hall in its setting. Fire safety and public access through the civic offices to the gallery were key design factors, and the space also supports important civic and staff functions.

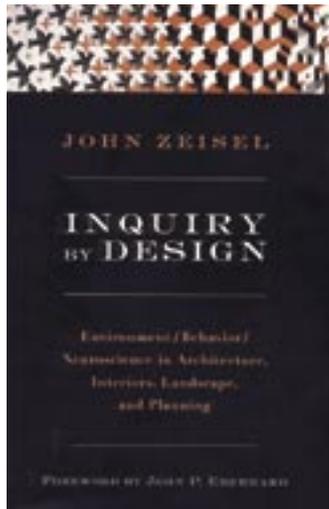
AN EXEMPLAR PROJECT

The new civic development represents a benchmark for embracing this Government initiative and supporting local authorities in rationalising and consolidating their operational assets. The new building will further improve the provision of community services, whilst adding to an integrated master plan generated to encourage social integration and regeneration.

David Cafferty and Richard O'Neil are directors at HLM Architects

INQUIRY BY DESIGN: ENVIRONMENT, BEHAVIOUR, NEURO-SCIENCE IN ARCHITECTURE, INTERIORS, LANDSCAPE AND PLANNING

JOHN ZEISEL, WW NORTON & CO, 2006, £21.99



ISBN 0 393 73184 7

This is an expanded edition of a handbook which has already had a long shelf life. At the time of its first edition in the early eighties, incorporating neuro-sciences into the analysis and understanding of design was a pioneering approach. The book is a methodological guide for researchers and practitioners of

design wanting to adopt a more academic approach to their work.

The detailed examples added to this new edition which illustrate how the content of each chapter is applied in practice are of particular interest, and apply to complex buildings and the spaces in between. They relate user needs to design and show how appropriately designed spaces can enhance users' satisfaction. Short summaries accompany each chapter helping navigation through the book and for in-depth reading without going from cover to cover.

The content is systematic and discusses the five essential characteristics of design. According to Zeisel, designing interconnects three basic activities: imaging, presenting and testing. It relies on two types of information: heuristic and catalyst for imaging, and a body of knowledge for testing. Design is conceived as a series of conceptual shifts and creative leaps, whereby designers continuously modify their results in the light of new

information. The final choice depends on the compatibility of the design with the environment and the coherence of its constituent parts. Zeisel sums up this process as a 'spiral metaphor'.

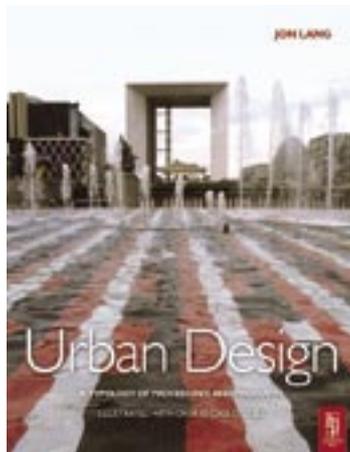
The second part of the book deals with research methods and techniques. Many of them are well established by now, such as focused interviews, standardised questionnaires, resorting to archive material and use of secondary data. His case studies illustrate typical obstacles and how to overcome them.

Perhaps the most impressive example to illustrate this use of neuroscience in developing design briefs is the one of an Alzheimer care and living treatment place. The patients enjoy relatively high independence due to the quality of the design, based on a good understanding of the specific spatial and orientation needs of Alzheimer patients. This book will be useful to both design students and designers who are keen to develop user friendly approaches.

Judith Ryser

URBAN DESIGN: A TYPOLOGY OF PROCEDURES AND PRODUCTS

JON LANG, ARCHITECTURE PRESS 2005, £24.99



ISBN 0 750 66628 5

Jon Lang is no stranger to a challenge. His 1994 classic, *Urban Design, The American Experience* is a tour through the theory and practice of urban design in the US. This new text attempts nothing less, presenting 50 international case studies to develop a typology of urban design procedures and products. For readers of Lang's earlier work, aspects of this typology will be familiar, but it is extended with three inter-related dimensions: the design and

implementation procedure; the product type; and the major paradigms that structure the process and give form to the product.

The first of these dimensions is divided into: total urban design (complete control by a single design team over a large area), all-of-a-piece urban design (schemes parcelled out to different development teams), piece-by-piece urban design (uncoordinated as the market allows, guided by area policies), and, finally, plug-in urban design (where infrastructure is provided and projects are plugged later). The product type Lang defines as: new towns, precincts, and infrastructure from the design of whole settlements to single one-off urban interventions. The final element – urban design paradigms – deals with the major movements in urban design in the 20th century. What he provides is a three-dimensional model to classify urban design projects, leaving two questions: Is the typology correct? Why bother classifying projects in this way?

To the first of these, Lang concedes that a typology could have many more

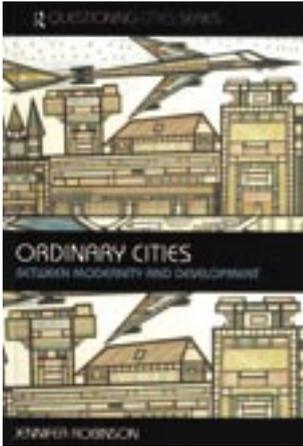
dimensions: physical context, use types, scale, funding models, etc. One might also query Lang's classification – is market incrementalism that different from incremental development, when the eventual outcomes are often much the same. But Lang does not claim that he has established the definitive typology, and rehearses the problems that typologies face – that they over-simplify the differences between projects. For him, however, and coming onto the second question, the typology is useful in understanding our now considerable project-based experience built up over 50 years or so.

The book is an international sourcebook of urban design projects, although the content of each is brief and descriptive. Lang argues that the real value of the book comes in drawing out key lessons, from the nature of the environments being produced, to process, and professional roles. Overall this book makes a major contribution to the empirical knowledge base of urban design.

Matthew Carmona

ORDINARY CITIES – BETWEEN MODERNITY AND DEVELOPMENT

JENNIFER ROBINSON, ROUTLEDGE, 2006, £100 HB



ISBN 0 415 30488 1

This book explores two concepts: modernity (being at the forefront) and development (to better one's life) both of which the author believes limits the cultural imagination of city life and the practice of city planning. This allows Western theorists to designate cities they do not really understand as 'not modern' or even 'primitive'. Throughout the book the author reiterates that the

labelling of cities as 'Western' or 'Third World', 'Developed' or 'Developing' diminishes the diverse and dynamic (if conflicted) stage for social and economic life. She also notes two profound errors in Western urban theory: the first, opposing 'tradition' to modernity, and the second, viewing the embrace of novelty as 'innovative' in Western context but 'imitative' in others.

The core of the book suggests that cities are cities; no matter where they are... so why label them? It questions if these labels are justified or an elitist, Western view? My own perspective is that I can understand the author's frustration in always being confronted in urban theory by Western scholars' indifference to 'Third World' cities, as if the theory of urban modernity only belongs to cities of the developed Western World – secretly branding all others as 'not modern'.

In response to these issues, the author proposes a rebalanced urban theory, focusing on 'ordinary cities', in which all urban scholars share and

learn from each other, not just from First World cities. This forms the basis for a new 'post-colonial' framework for debating cities, i.e. drawing from the complexity and the diversities of urban life rather than its state of development. This is not to make cities the same, but to consider not only their geography but more so their diverse cosmopolitan nature. Western studies focus so much on 'development/ modernism', that they miss the current, incredibly complex issues of everyday cities, such as distinctive social relationships and spatial forms due to beliefs, political power and economic privileges.

If urban theory is your thing then this will appeal to you, but it took me a few attempts to get past the introduction into the book. But knowing the Western World, 'Third World' theorists sometimes have to say something over and over to be heard, so I would agree that there is an urgent need to listen to this perspective on urban theory.

Liezel Kruger

ARCHIGRAM: ARCHITECTURE WITHOUT ARCHITECTURE

SIMON SADLER, MIT PRESS, 2005, £22.95



ISBN 0 262 19521 6

Simon Sadler's excellent book is a timely publication, because in a period of general lethargy it provokes serious thought about the state of urbanism and architecture; in addition to being an insightful biography of probably the most influential British architectural group of the twentieth century.

The Archigram group began publishing their eponymous campaigning pamphlet in 1961, and continued to provoke the architectural establishment with their avant-garde visions throughout the 1960s. Protesting against the institutionalisation of modernism, the group created futuristic imagery of

a future that embraced hi-tech systems and complex infrastructures. Today the group is probably best known for Ron Herron's memorable 1964 design for 'Walking City' – a huge hi-tech city that moves about on walking stilts.

Archigram were, to a degree, a cultural phenomenon of their age. Certain issues were particular to the 1960s - the possibilities offered by hi-tech, the decline of the artisan route into architecture and the influence of contemporaries like Buckminster Fuller. Yet as Sadler points out, the work of the group has often been dumped hastily and unsympathetically into the 'wacky sixties' bracket. Their very dated obsession with technological gadgetry, and a complete absence of a social or environmental conscience has tended to cloud the essence of the group.

In our current context, the Archigram story has renewed relevance. Embittered by the pervasive allure of policy targets and the politicisation of the profession during a time of manic welfare-led development, Archigram stood up to laud the avant-garde and the intentionally iconic. Though the group latterly came to be embraced by the

establishment they ranted against, 'this book returns to a time when Archigram was the irritant, not the toast, of the Royal Institute of British Architects'.

The objective was to excite the public about architecture, and free it from mediocrity and institutionalised baggage. The same could be done for contemporary urbanism. Sadler's book reminds us how the very restraint and 'shoe-string' style of early Archigram work provided such force. True, their visions were extravagant but also intentionally hypothetical, while today's pseudo-struggle between 'true' urbanists and the vanguards of the 'megastructure' is verging toward a playground scuffle rather than a meaningful debate.

Sadler's book is an excellent and unbiased review of a highly influential group, and can be enjoyed as a deep emersion into architecture's own 1960s counter-culture. Yet few will come away from the book without lamenting an equally resonant voice with which to challenge today's profession.

Alex Cochrane

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Directory of practices, corporate organisations and urban design courses subscribing to this index.

The following pages provide a service to potential clients when they are looking for specialist urban design advice, and to those considering taking an urban design course.

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Contact Babar Mumtaz

MSc in Building and Urban Design in Development. Innovative, participatory and responsive design in development and upgrading of urban areas through socially and culturally acceptable, economically viable and environmentally sustainable interventions.

UNIVERSITY OF GREENWICH

School of Architecture and Landscape,

Oakfield Lane, Dartford DA1 2SZ

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Contact Richard Hayward

MA in Urban Design for postgraduate architecture and landscape students, full time and part time with credit accumulation transfer system.

UNIVERSITY OF NEWCASTLE UPON TYNE

Department of Architecture, Claremont Tower, University of Newcastle, Newcastle upon Tyne NE1 7RU

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Contact Tim Townshend

MA/Diploma in Urban Design. Joint programme in Dept of Architecture and Dept of Town and Country Planning. Full time or part time, integrating knowledge and skills from town planning, architecture, landscape.

UNIVERSITY OF STRATHCLYDE

Dept of Architecture and Building Science,

Urban Design Studies Unit,

131 Rottenrow, Glasgow G4 0NG

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Contact Wolfgang Sonne

The Postgraduate Course in Urban Design is offered in CPD, Diploma and MSc modes. The course is design centred and includes input from a variety of related disciplines.

UNIVERSITY OF THE WEST OF ENGLAND, BRISTOL

Faculty of the Built Environment, Frenchay Campus, Coldharbour Lane, Bristol BS16 1QY

Tel 0117 328 3508

Fax 0117 976 3895

Contact Lee Stickells

MA/Postgraduate Diploma course in Urban Design. Part time two days per fortnight for two years, or individual programme of study.

Project-based course addressing urban design issues, abilities and environments.

UNIVERSITY OF WESTMINSTER

35 Marylebone Road, London NW1 5LS

Tel 020 7911 5000 x3106

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Contact Marion Roberts

MA or Diploma Course in Urban Design for postgraduate architects, town planners, landscape architects and related disciplines. One year full time or two years part time.

MORE ABOUT THE OLD MAN ON THE CANAL

Last year I wrote an Endpiece about Fred Grove, the man in his late 70s upon whom Birmingham City Council has served a CPO. He owns and lives in an old canal cottage in a Conservation Area. There is no intention to demolish his house; but every property within the development area is covered by the indiscriminate CPO. They want a tabula rasa; Fred has to go. The Public Inquiry starts in February, so will be over when this column appears; it should be interesting. I've just been writing evidence for the opposition.

One of the main planks in the Council's case is the principle of comprehensive development. To me, as I imagine to anyone who lived through the 1960s period of city rebuilding, that phrase is pretty discredited. It evokes elitist planning, a blindness to the merits of mixed, complicated, organic neighbourhoods, and an uncaring attitude to the invisible network of community relationships which created them, and which were destroyed in the redevelopment. I find it extraordinary that it can be used in the 21st century as a positive aspiration, apparently without shame.

Our suspicion that the principle of comprehensive development is essentially there for the convenience of the future developers was confirmed in a meeting which we had with the City Council and the regional Development Agency (RDA). In response to our critique of comprehensive development, the representative of the RDA said 'People want a comprehensive approach'. 'Which people?' I asked him. 'The development fraternity' was his answer. It's striking that in his frankness he didn't realise he was giving anything away.

Apart from Fred's house, we are also objecting to the CPO on Rosa's café and the Los Canarios restaurant. These are both long-established businesses, both unfortunately in the way of the new City Centre Park. Rosa's is run by a family descended from Italian immigrants, now in its fourth generation. The Spanish restaurant has also been there as long as I can remember. They are both the kind of places – bars, cafes, restaurants – which the City Council explicitly states it wants facing the new park. Yet if they are demolished, it is likely they will go out of business. Instead of local businesses with their roots in local history, we are likely to get global corporations such as Pizza Hut and Starbucks.

One of the themes of our evidence objecting to the CPO is social justice. People receive financial compensation when CPO'd of course, at the current market value. But when a neglected, rundown inner city area is subsequently redeveloped with new apartments, workplaces and restaurants, that value goes up, maybe several times over. Yet the people who have invested many years – several generations in the case of Rosa's – of their lives in the neighbourhood are forcibly excluded from enjoying the benefits of the new prosperity and environmental quality. These will instead be enjoyed by newcomers who buy in post-development. This is fundamentally unjust.

A friend and ally from Friends of the Earth put it succinctly. When the area is undervalued and overlooked, as it has been for decades, local residents like Fred and local businesses like the café and restaurant are ignored by authority. They persist and manage as well as they can. When a new plan is made, big investment is prepared, and a new prosperity is on the horizon – then they get rejected.

Joe Holyoak

Stop press: The City Council has backed down over Fred's house.