failure to acknowledge the implications of projections of declining populations.

The traditional Japanese urban model, based on economic and population expansion, and leading to urban sprawl, is in need of transformation. Distant Japanese suburbs, brought into existence relatively recently during mounting pressure on land, are proving to be the first to be abandoned as pressure decreases. The transition from urban sprawl to urban shrinkage raises questions about the sustainability and reversibility of urban developments and about the appropriateness of the traditional urban model and its capacity for adaptation. Here surely are major research tasks for urban morphologists.

References

Aveline, N. (2003) 'L'expérience particulière du Japon en matière de renouvellement urbain', *Droit et Ville* 55, 59-69.

Aveline, N. and Ling-Hin, L. (eds) (2004) *Property markets and land policies in northeast Asia. The case of five cities: Tokyo, Seoul, Shanghai, Taipei and Hong Kong* (Maison Franco-Japonaise, Center for Real Estate and Urban Economics, Hong Kong).

Berry, B. J. L. (ed.) (1976) *Urbanization and counter-urbanization* (Sage, Beverly Hills, CA).

Conzen, M. R. G. (1960) *Alnwick, Northumberland: a study in town-plan analysis* Institute of British Geographers Publication 27 (George Philip, London).

Darin, M. (2000) 'French belt boulevards', *Urban Morphology* 4, 3-8.

Ducom, E. (2003) 'La théorie des ceintures limitrophes (fringe belts): discontinuités d'occupation de l'espace sur les franges des villes', *L'information géographique* 67, March, 35-45.

Ducom, E. and Yokohari, M. (2006) 'L'involution démographique et urbaine dans l'aire tokyoïte', *Annales de la recherche urbaine* 100, 23-9.

Flüchter, W. (2006) 'Megalopolises and rural peripheries: shrinking cities in Japan', in Oswalt, P. (ed.) *Shrinking cities. Vol. 1: International research* (Ostfildern-Ruit, Hatje Cantz) 83-92.

Fujimasa, I. and Furukawa, T. (2000) *Welcome Jinko Gensho Shakai* (*Welcome population decrease era*) (Bungeishunju, Tokyo).

Oswalt, P. (ed.) (2006a) *Atlas der schrumpfenden Städte* (Ostfildern-Ruit, Hatje Cantz).

Oswalt, P. (ed.) (2006b) *Shrinking cities. Vol. 1: International research* (Ostfildern-Ruit, Hatje Cantz).

Pallagst, K. (2005) 'The end of the growth machine: new requirements for regional governance in an era of shrinking cities', unpublished paper presented to the Association of Collegiate Schools of Planning Conference, Kansas City, October.

Whitehand, J. W. R. and Morton, N. J. (2003) 'Fringe belts and the recycling of urban land: an academic concept and planning practice', *Environment and Planning B: Planning and Design* 30, 819-39.

Bridging the gap: applying urban morphology to successful planning practice

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As pointed out in the editorial of the last issue of this journal (Whitehand, 2007), urban morphology ought to have the potential for playing a positive role within planning practice. This includes the day-to-day control of development, as it is through the numerous incremental decisions that the form of urban areas is ultimately determined. Unfortunately, published accounts of its positive use in practice are rare. It is likely that there are many good examples but that practitioners normally do not have the time to write them up. Although policy documents such as development plans and site briefs are published, obtaining, collating and extracting useful content from them can be a tedious task.

Fortunately, a full account of an example for a whole town (Hall, 2007) is now available. It relates the story of the improvements made to the British town of Chelmsford from 1996 onwards that led to the award by the central government of the quality mark of Beacon Status for the Quality of the Built Environment in 2003. This book sets out a way of building urban design into the local planning process based on practical experience, an approach that was proactive.

Two key elements for achieving such an

Table 1. Character areas representing levels of intensity of development

	< Higher intensity			Lower intensity >
	Level 1	**Level 2**	**Level 3**	**Level 4**
Form	Continuous frontage	Continuous frontage	Mainly continuous frontage	Landscape dominates buildings
Mix	Flats and commercial	More flats than houses	More houses than flats	Houses only
Height	Above 4 storeys	Up to 4 storeys	Up to 3 storeys	Up to 2 storeys
Parking quantity	Less than one parking space per unit	Approximately one parking space per unit	Above one parking space per unit	Above one parking space per unit
Parking design	Underground, undercroft parking, car clubs	Undercroft, decked-over parking, parking courts, car clubs	Parking squares and courts, on-curtilage parking	On-plot parking
Private space	Balconies and shared garden	Balconies and shared garden	Individual and shared gardens	Individual gardens
Local open space	Urban squares	Urban squares	Parks contained by buildings	Parks with rural character
Density (dwellings per ha)	Above 100	40-100	Above 30	Less than 30

approach were sound design principles and explicit published policy. The design principles sought to create a sense of place, respect for context and the meeting of functional needs. They required thinking of places and communities at different spatial levels: the town, the neighbourhood, and the street, and taking account of the physical and intangible qualities that go to make a place. Explicit published policy enabled all parties in the development process to know the position of the planning authority at an early stage and to know it clearly. At Chelmsford, it had two components: a clear physically-based spatial strategy and briefs for all significant sites.

One task of the physically-based spatial strategy was to relate the intensity of development to accessibility, in pursuit of the reduction of the need to travel and travel by sustainable modes (Chelmsford Borough Council, 2001a). At Chelmsford, intensity was used in preference to density because it as much about activity, social interaction, as just a quantitative measure. The approach went further than just a policy statement by saying that a plan should link through to more detailed physical design. This was done not just by specifying the location of more intensive development but also by giving guidance on the physical nature of the different levels of intensity that should be permitted in different locations.

The first step was the identification of *character areas* where the intensity of development was made explicit through three-dimensional physical parameters. These formed a typology that could be used to structure the locational aspects of two-dimensional spatial policy, as shown by Table 1. The physical implications for different levels of intensity of development for use in the development plan were then made explicit by a matrix that specified the expected quantitative and qualitative aspect of urban form for the town centre, for suburban areas and for neighbourhood centres.

Planning briefs were the principal vehicle for setting out design expectations at site level. Although they can cover a variety of formats, the approach adopted at Chelmsford was that they should provide unambiguous guidance on physical form, including specification of street blocks and frontages. An example is provided by the Master Plan for the site of Beaulieu Park North (Chelmsford Borough Council, 2001b). The text provided a systematic appraisal of the site and included a new, and strongly prescriptive, master-plan diagram in which street blocks, frontages, pedestrian routes and local open spaces were specified. A further diagram (Figure 1) identified the character areas that were to be provided within the urban form.

The design principles were seen as a useful and creative tool for use in negotiations and not just as 'motherhood' statements or points that are taken for granted. This meant that they needed to be translated into a format for use in the day-to-day control

Table 2: Physical expression of objectives for design

Objectives for urban design	Urban structure	Land-use locations	Layout within the site	Siting, height and massing	Safety and convenience	Appearance	Sustainability
Character	Forms coherent part of the wider pattern of development	Location of uses is right for area	Buildings form coherent group. Integral landscape	Reinforces identifiable local siting, scale and form	Creates a sense of safety	Attractive composition of materials and details	
Continuity and enclosure	Continuous street frontage making streets and spaces Buildings define usable space	Allows linkage to future development of adjoining land	Clear definition of private and public areas Service area secluded	Built frontage continues existing street line Existing street form and scale reinforced	Secure boundaries between public and private areas	Elevations ordered to lead the eye and create rhythms	
Quality of the public realm	Public space is a strong component of layout Seamless link with existing public space	Public space well located Public spaces are a good size and shape	Access points and route alignments work Successful, usable outdoor spaces Ground-floor uses face street	Built form reinforces existing public space	Safe, well observed public spaces Free of clutter and hazard	Attractive and uncluttered outdoor areas Well-organized street furniture and landscape	Robust surface materials and street furniture
Ease of movement	Pedestrian routes are the basis for structure All access needs	Connects to existing network of routes Land uses and transport	Accessible and permeable layout easy to move through	Connect development to existing places and network of routes	People before traffic Movement of people creates safe place	Surfaces show routes	Easy access to public transport
Legibility	Understandable layout structure	Layout designed around vistas and landmarks	Recognizable routes, intersections and landmarks	Relates to existing views and landmarks	The layout is easy to navigate and to know where you are	Details and materials make recognizable areas Clear image	
Adaptability		Location of accommodation where it will suit different uses	Buildings adaptable for different uses		Avoid risk of neglect and vacancy		Accommodation that will respond to changing needs and demands
Diversity		Multiple types of activity for vitality	A mix of compatible uses	Locally distinctive details			Variety of activity making a viable place

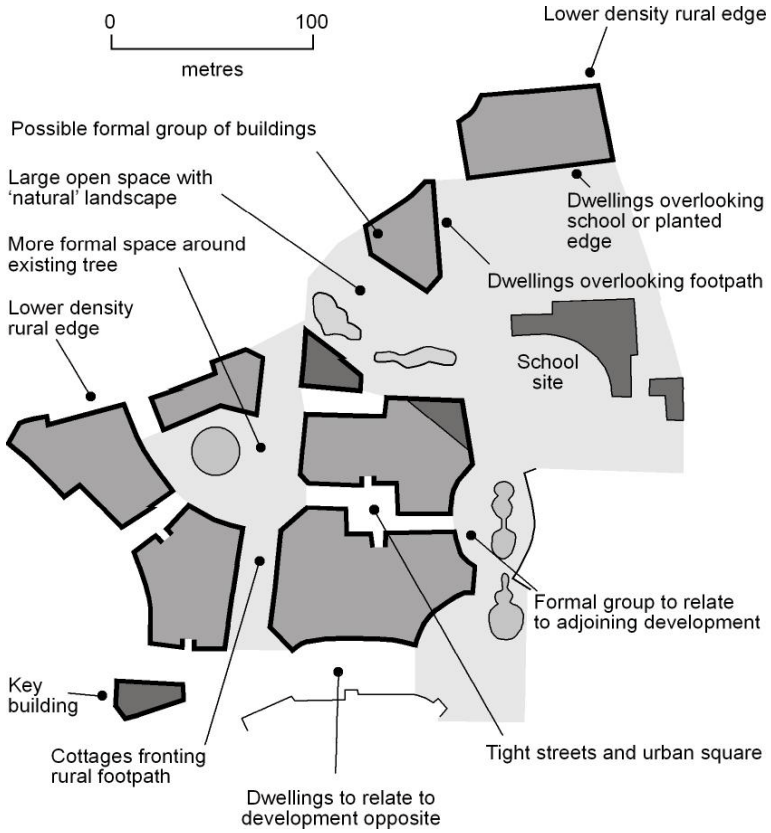

Figure 1. Character areas to be provided within Beaulieu Park. Reproduced with permission from Chelmsford Borough Council (2001b), p. 16.

process. The matrix shown in Table 2 was developed by one of the Council's leading urban design officers, Roger Estop, as an experiment. The urban design objectives from the British government publication *By design* (Department of the Environment, Transport and the Regions, and Commission for Architecture and the Built Environment, 2000) were listed down the left side and the cells of the matrix revealed their physical expression. When considering actual proposals, they enabled the objectives specific to the site to be formulated. When they were turned into negatives, 'the proposal does not ...', they showed how urban design objectives could be expressed in the reasons given for refusal in the development control process.

What was notable in practice was, first, how both the spatial policy and detailed guidance expressed and prescribed the desired physical form and, secondly, how this was pursued through active negotiation. Moreover, a high quality urban environment was delivered in a uniform manner, not merely through isolated examples. In the period 1996-2003 not just the policies but the life and appearance of the town were turned around.

References

Chelmsford Borough Council (2001a) *Chelmsford Borough Local Plan Deposit Draft* (Chelmsford Borough Council, Chelmsford).

Chelmsford Borough Council (2001b) *Beaulieu Park Northern Area* (Chelmsford Borough Council, Chelmsford).

Department of the Environment, Transport and the Regions, and Commission for Architecture and the Built Environment (2000) *By design: urban design in the planning system* (Thomas Telford, London).

Hall, T. (2007) *Turning a town around: a pro-active approach to urban design* (Blackwell, Oxford).

Whitehand, J. W. R. (2007) 'Urban morphology and policy: bridging the gap', *Urban Morphology* 11, 79-80.