

# URBAN LIVEABILITY FORUM

PRESENTS

"MY RESOURCE. MY RESPONSIBILITY"

A knowledge series from the experts on effective management of resources to enhance urban Liveability during and post pandemic.

## HEALTH AND GARDEN CITY: TOWARDS NEW FUTURES PART II

by, Ms. Prachi Rampuria,  
EcoResponsive Environments

### IN THIS ISSUE :



RE-IMAGINING PLOTS  
& LAND USE SYSTEM



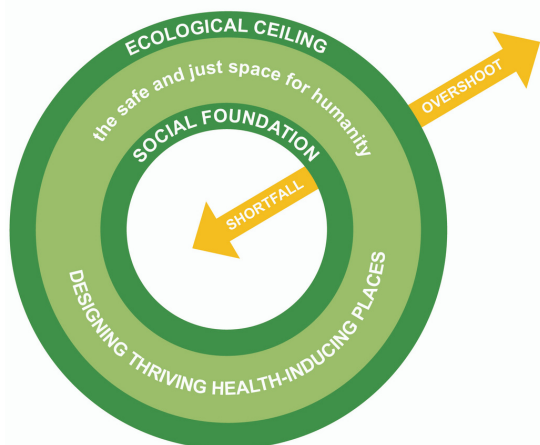
ADAPTABLE BUILDING  
STRUCTURES FOR INTER-  
GENERATIONAL NEEDS



SMART DETAILING FOR  
MULTI-SCALE SENSORY  
EXPERIENCES

## "My Resource. My Responsibility"

A knowledge series from the experts on effective management of resources to enhance Urban Liveability during and post pandemic.



*Letchworth Garden City in Hertfordshire, England*

Source: <https://www.cnu.org/publicsquare/2017/01/10/garden-towns-need-some-garden-city-thinking-succeed>

**Fig. 1**  
'Humanity's 21st century challenge is to ensure that no one falls short on life's essentials (from food and housing to healthcare and political voice), while ensuring that, collectively, we do not overshoot our pressure on Earth's life-supporting systems, on which we fundamentally depend – such as a stable climate, fertile soils, and a protective ozone layer'.<sup>1</sup> Source: Diagram adapted from 'Doughnut Economics' by Kate Raworth.

## Health And Garden City: Towards New Futures Part II

by, Ms. Prachi Rampuria, EcoResponsive Environments

IN THIS ISSUE :  
**RE-IMAGINING PLOTS &  
LAND USE SYSTEM**

**ADAPTABLE BUILDING  
STRUCTURES FOR INTER-  
GENERATIONAL NEEDS**

**SMART DETAILING FOR  
MULTI-SCALE SENSORY  
EXPERIENCES**

Against the background of global climate change and rising social inequalities, people and planetary health are at a crossroads. Our 21st-century challenge is to create conditions for a thriving, health-inducing future for all, within the means of the planet (Fig. 1).

*Continued...*

### PLOTS AND LAND USE

Current market processes increasingly drive the pattern of building types, resulting in a focus towards those that generate the highest financial returns and tending to squeeze out others. This has adverse impacts: for example, social housing is grouped together into low-esteem areas affecting mental health and ghettos of elderly living accommodation that worsen loneliness.





Grange-in-the-Hedges, in contrast, is organised with finegrain, plot-based perimeter blocks, each with a large communal garden encouraging intergenerational living. Local amenities, such as school and shops, are located on the most connected streets, encouraging walking and cycling. The shared communal spaces, with controlled community access, afford sheltered opportunities for urban food production with therapeutic impacts. Surrounded by a mix of dwelling types and tenancies, the layout encourages opportunities to meet a wide range of people – addressing the problem of loneliness, but with a ‘gasket’ of private gardens as a protective interface for family life. Safely disconnected from the wider settlement, these communal gardens are also suitable for active, relatively unsupervised play in outdoor green environments supporting child development and combatting ‘stranger danger’. A perimeter block with a mix of housing types and tenures, involving people of differing ages and lifestyles, generates diversity in the realms of form, sensory experience and cultural meaning – essential for psychological well-being (Fig.7).

***‘Re-imagining the plots and land-use system in the form of mixed-use, finegrain perimeter blocks with private communal gardens to encourage social integration and intergenerational living.’***



**Fig. 7**

*Diagrammatic representation of a fine grain plot-based perimeter block with a central communal garden with controlled community access, enabling intergenerational living.*

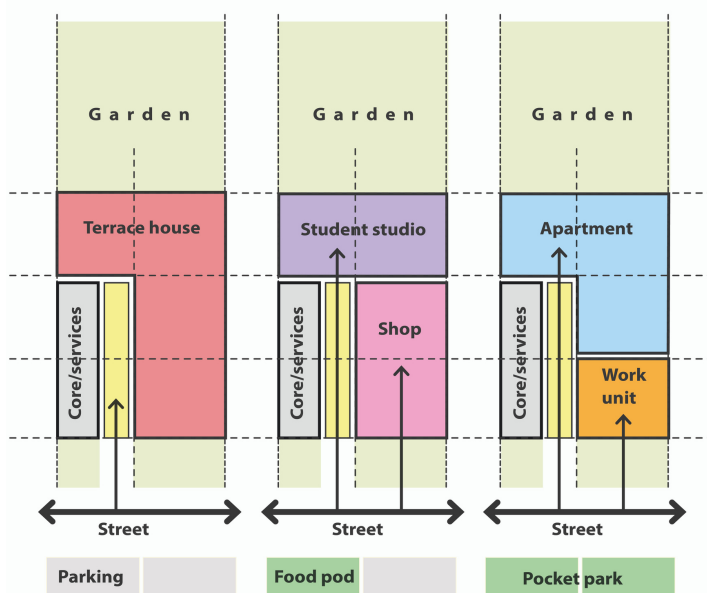
*Source: EcoResponsive Environments.*

## BUILDINGS

We're witnessing a rapid evolution in working patterns and household structures, owing to a range of socio-economic issues; such as ageing population, loneliness, financial difficulties for young people seeking to buy homes, and increased amounts of working from home. A mismatch is therefore developing between activity patterns and building design; aggravated by the mainstream design culture of use-specific, non-adaptable buildings, focused on responding to short-term market needs; contributing to shorter building lifespans. This has implications on waste generation, and on carbon emissions associated with the construction industry, worsening climate change and, consequently, planetary health.

The market's drive for profitability inexorably limits the diversity of activities that a project can initially contain. Long-life buildings open up possibilities for sidestepping these pressures in the longer term. As buildings age, their rent levels typically fall, relative to those that newer buildings can attract; enabling a wider range of users to afford the lower rents; increasing diversity over time, and offering people a greater range of activities within cycling and walking range, thereby supporting public health.

These factors suggest a general argument for 'slow architecture': the creation of adaptable buildings with active frontage that remain useful long enough to cope with more rapid cycles of social and economic change, contributing to everyday health and to the settlement's overall energy efficiency. Grange-in-the-Hedges therefore re-imagines the building system as a series of flexible spaces that can be updated to reflect the needs of each generation. Particularly on main streets with potential 'passing trade', the dwelling's street interface allows alternative configurations to support emerging types of socially positive home businesses (Fig. 8).

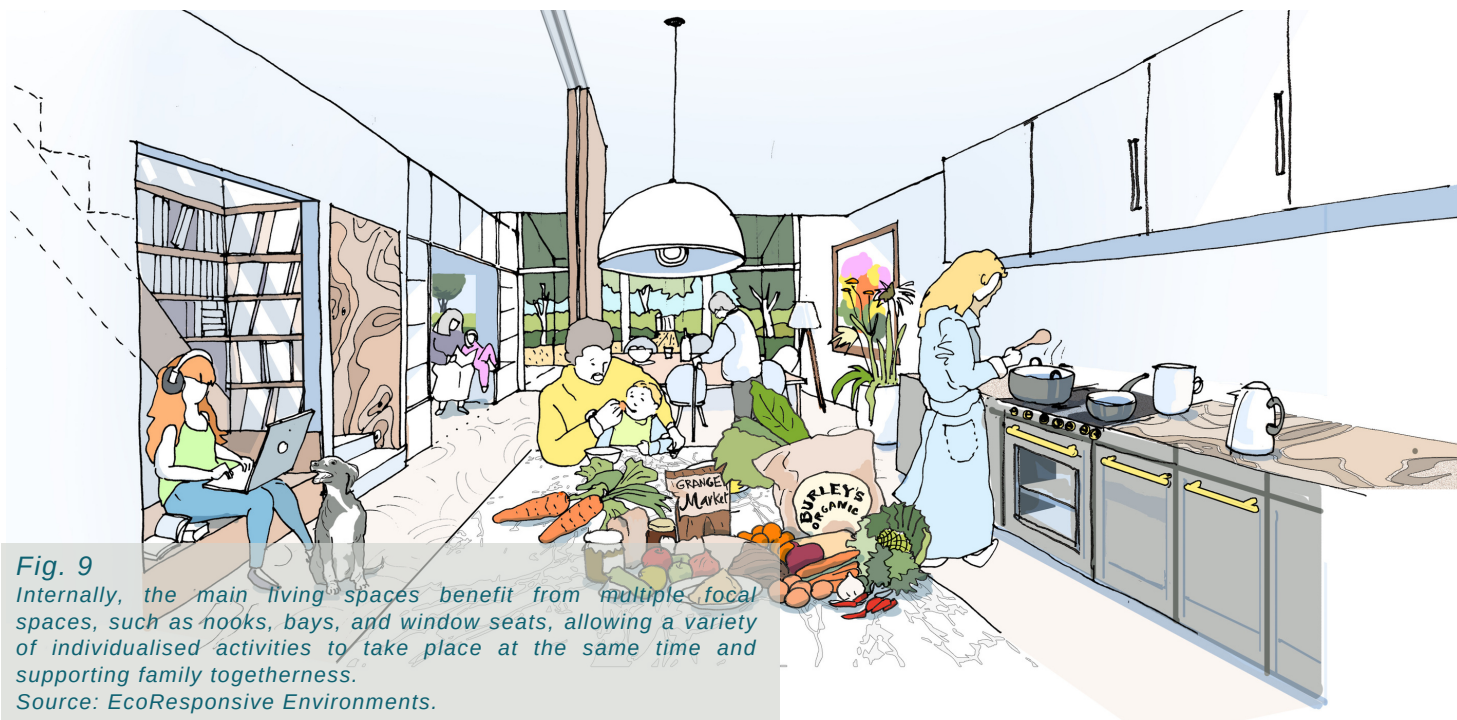


**Fig. 8**  
Diagrammatic representations of house plans showing grouping of the 'hard' services and circulation spaces, within a simple grid structure supporting easy reconfiguration of the 'soft' internal spaces and external skin.  
Source: EcoResponsive Environments.

**'Re-imagining the building system as adaptable structures with active frontage that can be updated to reflect the needs of each generation.'**

Internally, the main living spaces benefit from multiple focal spaces, such as nooks, bays, and window seats, allowing a variety of individualised activities to take place at the same time and supporting family togetherness. Such conditions create appropriate settings for a wide variety of individual activities to take place together, against the tide of increasing isolation while supporting the potential for flexible working. (Fig. 9)





**Fig. 9**  
Internally, the main living spaces benefit from multiple focal spaces, such as nooks, bays, and window seats, allowing a variety of individualised activities to take place at the same time and supporting family togetherness.  
Source: EcoResponsive Environments.

## COMPONENTS

At a perceptual level, well-being is fundamentally affected by the materiality of the physical environment. Evolving in a context of other natural systems, the human brain developed to enable easy processing of sensory information organised in multi-scale structures.

Natural systems, from coastlines to birdsong, although varying widely in almost every way, share one common characteristic: they have evolved into multi-scale structures containing many more small elements than large ones, related together in similar ways at each scale and remaining rich in details regardless of how much they're magnified. Psychologists call this fractal fluency.

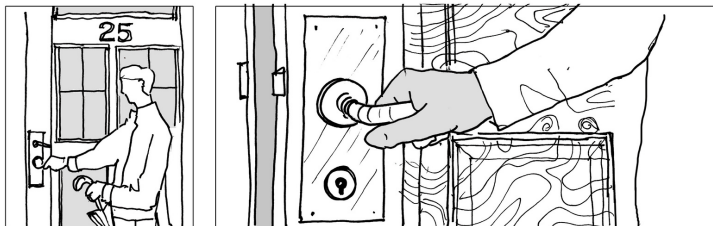
Grange-in-the-Hedges draws on this attunement with nature's scalar structure, learning from the pioneers,<sup>25,26</sup> to re-imagine the aesthetics of streets, buildings and open spaces using today's technology, sustainable materials and contemporary detailing. The range of likely viewing distances affects the range of scale at which richness must be considered.

Where the surface will be seen at long range, large-scale richness is necessary; while at close range, richness must be achieved by small-scale elements. So, to maintain richness from long range to close range, we need a hierarchy of elements from large-scale to small-scale; for example, building envelopes with several gables and bays, each with several windows, several glazing bars, and complex profiles, set in the smallest-scale texture of rough-cast, supporting multi-scale sensory experience. This approach proposes turning today's design culture on its head by substituting organised complexity with detail at all scales, for current minimalist aesthetics (Fig. 9).



**Fig. 9**

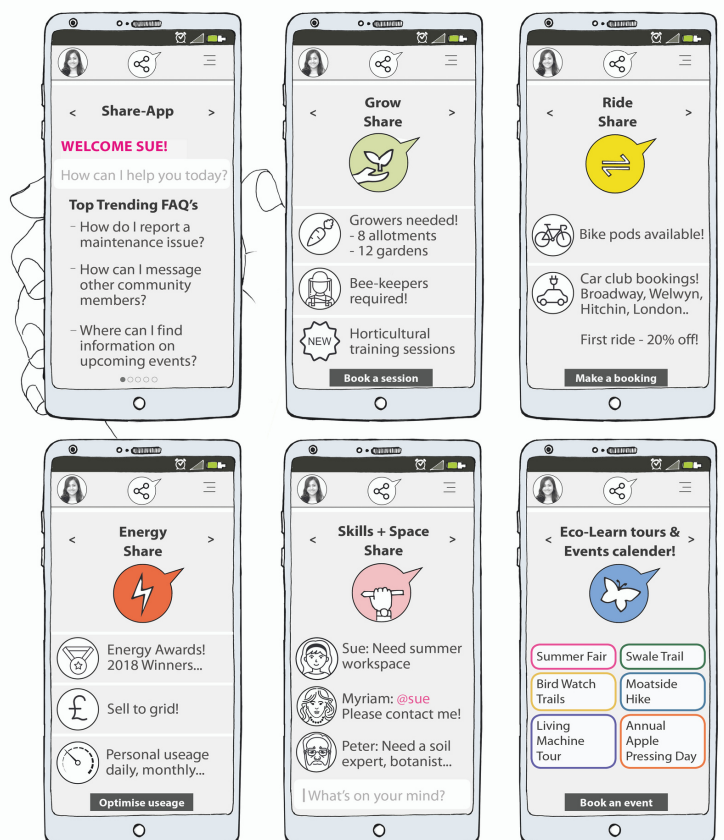
Architecture rooted in organised complexity: details within the simple overall forms and that is maintained at every scale – so as you go closer and closer something new is revealed.  
Source: EcoResponsive Environments.



**'Re-imagining detail components as multi-scale structures using today's technology, sustainable materials, and contemporary aesthetic detailing – to support multi-scale sensory experiences.'**

## INFORMATION SYSTEMS

Beyond short-term commercialism, the project seeks long-term sustainable value-capture by using technological innovation to empower community involvement and a community-led management system through 'Share-App'. Considering data as 'currency', the idea is for residents to benefit from their own data. It enables residents to benefit from a variety of services in the fields of mobility, joint energy generation, food production, and effective use of space and skills. People may use flexible housing types for creating goods and services – from gardening to small-scale manufacturing – and trading and sharing equipment through information systems, such as Share-App, to create an ever-expanding social marketplace. The desired outcome is to increase quality of life, self-sufficiency and enable a new co-operative economy (Fig.10).



**Fig. 10**

Integration of bottom-up information systems to empower community involvement.  
Source: EcoResponsive Environments.





## CONCLUSION

This competition was a tool for an in-depth exploration of how design can support healthy living in the context of current economic, social and ecological crisis. At the deepest level, we found that the Garden City movement's systemic approach provided a holistic structure for this exploration, allowing us to identify a re-imagination agenda for healthy place-making across a range of scales.

- *Re-imagine the water system to be as local as possible – to slow runoff, maximise aquifer replenishment, avoid flooding downstream, and reduce waste and external dependency.*
- *Re-imagine the green system as multi-scale, multi-function productive landscapes, affording everyday exposure to the interactions with natural systems.*
- *Re-imagine the mobility system as a highly connected, landscape-integrated network that is convenient, safe and attractive for low-energy, low-pollution, healthful walking, cycling and play.*
- *Re-imagine the plots and land-use system in the form of mixed-use, fine-grain perimeter blocks with private communal gardens.*
- *Re-imagine the building system as adaptable structures with active frontage that can be updated to reflect the needs of each generation.*
- *Re-imagine the detailed components of streets, buildings and open spaces as multi-scale structures using today's technology, sustainable materials, and contemporary aesthetic detailing – to support multi-scale sensory experiences.*

The next task is to encourage wider debate around this reimagination agenda, so that the mainstream practice of design can similarly be re-imagined.

## REFERENCES

- Raworth, K. Doughnut economics: seven ways to think like a 21st century economist; 2017.
- Howard, E. To-morrow: a peaceful path to real reform. London: Swan Sonnenschein; 1898.
- Ministry of Housing, Communities and Local Government. New garden communities programme announced. MHCLG; 2018. Accessed on 15 August 2019, <https://www.gov.uk/government/news/james-brookshire-plans-increase-in-garden-towns>
- Swinney, P. The conflict at the heart of the garden city idyll. Centre for Cities; 2014. Accessed on 13 September 2019, <https://www.centreforcities.org/blog/the-conflict-at-the-heart-of-the-garden-city-idyll/>
- Kuo, M. How might contact with nature promote human health? Promising mechanisms and a possible central pathway. *Frontiers in Psychology*, 6, 1093; 2015.
- Reilly, JJ et al. Health consequences of obesity. *Archives of Disease in Childhood*, 88, 748-752; 2003.
- Collins, PY et al. Grand challenges in global mental health. *Nature*, 475 (7354), 27-30; 2011.
- Dept of Health and Social Care. No health without mental health: a crossgovernment mental health outcomes strategy for people of all ages. London: HM Government; 2011.
- Bullmore, E. *The Inflamed Mind: a radical new approach to depression*. London: Short Books; 2018.
- Haines-Young, R and Potschin, M. The links between biodiversity, ecosystem services and human well-being, (in press), in Rafelli and Frid (eds) (in press).
- Douglas, JM, Watkins, JS, Gorman, D, and Higgins, M. Are cars the new tobacco? *Journal of Public Health*, volume 33, issue 2, 160-169; 2011.
- Kaplan, S. The restorative benefits of nature: toward an integrative framework. *Journal of Environmental Psychology*, 15, 169-182; 1995.
- National Transport Authority. Permeability Best Practice Guide, p.5. Accessed on 8 October 2019, [https://www.nationaltransport.ie/wpcontent/uploads/2011/12/NTA\\_Permeability\\_Report\\_\\_Web.08.2015.pdf](https://www.nationaltransport.ie/wpcontent/uploads/2011/12/NTA_Permeability_Report__Web.08.2015.pdf)
- Klein, NJ and Smart, MJ. Millennials and car ownership: less money, fewer cars. *Transport policy*, Elsevier, vol. 53(C), 20-29; 2017.
- Diggle, J, Butler, H, Musgrove, M and Ward, R. *Brick by brick: a review of mental health and housing*. London: Mind; 2017.
- Cattani, M, et al. Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions. *Ageing and Society*, 25, 41-67; 2005.
- Bellows, A, Brown, K and Smit, J. *Health Benefits of Urban Agriculture*; 2008.
- Louv, R. *Last Child in the Woods: saving our children from nature-deficit disorder*. Chapel Hill NC: Algonquin Books; (2nd ed.) 2008.
- [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/317771/10-1316-estimating-co2-emissions-supporting-low-carbon-igt-report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/317771/10-1316-estimating-co2-emissions-supporting-low-carbon-igt-report.pdf)
- Lynch, K. *Wasting Away: an Exploration of Waste: what it is, how it happens, why we fear it, how to do it well*. San Francisco, Sierra Club; 1990.
- Jacobs, J. *The Death and Life of Great American Cities*. London: Pimlico; 1961.
- Altman, I and Wohlwill, JF (eds). *Human behaviour and the environment*, vol New York: Plenum Press; 1983.
- Joye, Y. Architectural lessons from environmental psychology: the case of biophilic architecture. *Review of General Psychology*, 11, 4, 305-328; 2007.
- Taylor, R and Spehar, B. Fractal fluency: an intimate relationship between the brain and processing of fractal stimuli; 2016. 10.1007/978-1-4939-3995-4\_30.
- Jones, O. *The Grammar of Ornament* (1856). Ware: Omega Press, p2; 1986.
- Parker, B and Unwin, R. *The Art of Building a Home*. London: Longmans; 1901.



---

## ABOUT THE TEAM



### EcoResponsive Environments

EcoResponsive Environments is a multidisciplinary design practice committed to developing a systemic approach to shaping our built environment. We are an innovative urban design and architectural practice based in London committed to developing and promoting a systemic approach to design; in particular through developing a common language for co-ordinating the ideas of client and stakeholders, diverse professional disciplines, and for involving local knowledge in design. Prachi Rampuria, the lead author, is co-founder and director of the practice.

Prachi is an architectural designer and urbanist. She embraces an evidence-based people-centric approach to design. She has led multi-disciplinary design teams for masterplanning, regeneration and public realm design projects within diverse cultural contexts such as the UK, Cuba, Middle-East, and India. She is also an Associate Lecturer at Oxford Brookes University.

#### Contacts:

EcoResponsive Environments | Architecture and Urban Design | London

Website: <https://www.ecoresponsiveenvironments.com>

E-mail: [p.rampuria@ecoresponsiveenvironments.com](mailto:p.rampuria@ecoresponsiveenvironments.com)

---

To Contribute an article, Shaurya Somani

e: [info@urbanliveabilityforum.com](mailto:info@urbanliveabilityforum.com)

t: +91-9619604324

For Partnership, Sarang Mehta

e: [sarang@urbanliveabilityforum.com](mailto:sarang@urbanliveabilityforum.com)

t: +91-9004785696.



[www.urbanliveabilityforum.com](http://www.urbanliveabilityforum.com)