

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 I

by, Ms. Prachi Rampuria,
EcoResponsive Environments

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HEALTHY PLACE-
MAKING



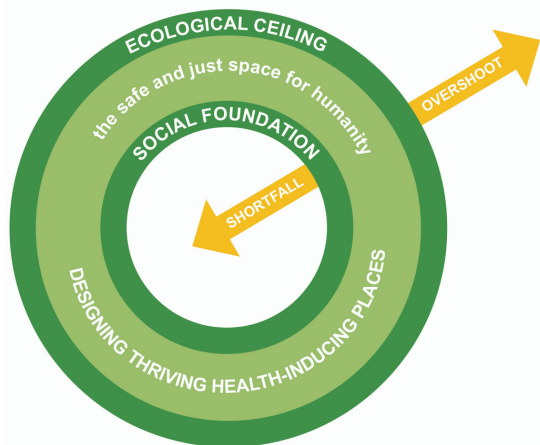
MULTI-SCALAR DESIGN
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JOINED-UP THINKING

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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'.¹ Source: Diagram adapted from 'Doughnut Economics' by Kate Raworth.

Health And Garden City: Towards New Futures Part I

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JOINED-UP THINKING

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).

PIONEERING HEALTHY PLACE-MAKING

In 1898, Ebenezer Howard put forward a pioneering approach to healthy place-making in 'To-morrow: a peaceful path to real reform'. Intended to "balance the most energetic and active town life, with all the beauty and delight of the country", Howard's Garden City movement addressed the dire living conditions faced by people drawn to towns in search of work, as technology eroded agricultural employment.

The movement was a direct response to the overcrowded, unhygienic housing and monotonous working conditions of the early 19th century, which had resulted in a sharp rise of health issues such as tuberculosis and alcoholism. At its heart, the movement promoted healthy lifestyles through holistic design – seeking basic social and economic fairness. These values are as important and valid today as ever but they must now address new health issues.

FACING A NEW TOMORROW

Current ways of life are damaging natural capital's capacity to regulate climate; to provide healthy food, clean air and water; and to offer the cultural inspiration on which all aspects of human health ultimately depends. Artificial intelligence is rapidly reducing the demand for all but highly skilled workers, generating a precariat trapped in poverty and low job satisfaction. This can have a deep impact on the mental health of both individuals and wider communities, although the creative use of ICT has growing potential to support an alternative co-operative economy. Social systems, too, face problems, with many people trapped between endemic loneliness and a pervasive sense of stranger-danger. The Garden City approach must therefore evolve to face a new tomorrow.

Although current issues have rekindled interest in learning from the original Garden City ideals, expressed through government initiatives, conferences and talks, these initiatives have also received widespread criticism: the Garden City brand is accused of being used often as a shallow exercise in public relations to justify suburban sprawl. The RIBA competition 'Re-imagining the Garden City', seeking to expand the original Garden City of Letchworth, offered us an opportunity to rethink the current relevance of the Garden City in a deeper way. We present Grange-in-the-Hedges – the winning proposal from 95 international entries – as a case study in re-imagining a modernday Garden City (Fig. 2). The purpose of these notes is to explain the healthy living principles that underlie our proposal.

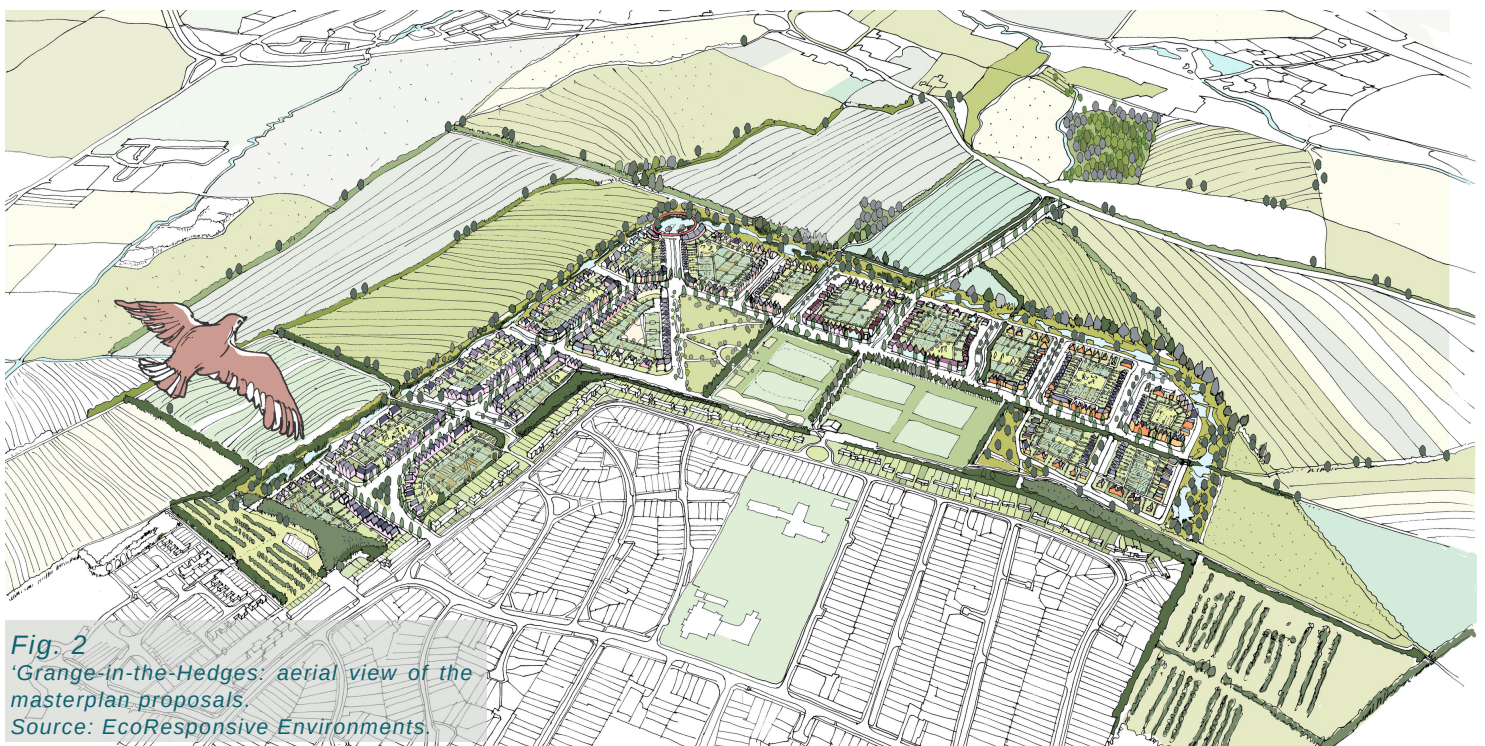


Fig. 2
'Grange-in-the-Hedges: aerial view of the masterplan proposals.
Source: EcoResponsive Environments.

Although demonstrated in the low density, edge-of-town context of the competition site, our project embodies robust ideas: adaptable to higher-density living and diverse cultural contexts.

A MULTI-SCALAR DESIGN APPROACH

The Garden City's long-lasting success stems from the pioneer designers' embrace of complexity; weaving together the systems of natural landscape, public space, plots and buildings in symbiotic ways across multiple scales of space and time. To enable long-term health and well-being, the Garden City movement was driven by a creative search for 'value capture' – understood as gaining the maximum community benefit from external commercial forces, while maximising the cultural and provisioning services afforded by the natural world.

Grange-in-the-Hedges re-imagines this multi-layered approach. The new possibility is that we can lace them together with bottom-up information systems for a better collective future. Unlike the original Garden City, however, this is expanding an existing place; the Garden City ethos demands that each layer of the new place must support existing people's interests (Fig. 3).

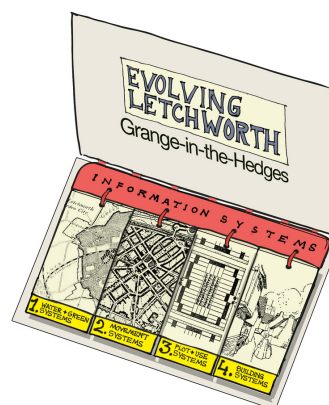


Fig. 3

Water, green structure, human movement and development plots are interlaced with bottom-up information systems – challenging the stresses of underemployment, climate change and social disconnection to evolve a renewed Garden City fabric to create the healthy places of tomorrow. Source: EcoResponsive Environments

THE NEED FOR JOINED-UP THINKING

To create this re-imagined fabric in practice, we need to bring together all kinds of design skills. These are difficult to integrate because they are traditionally separated out into specialised disciplines, with health workers in a separate silo (Fig. 4).

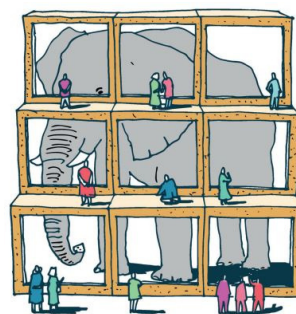


Fig. 4

Professional myopia exposes all designers to the danger of making wellintended decisions in ways that affect other subsystems, and through them the settlement as a whole and, eventually, the wider ecosystem, in unintended ways. Source: EcoResponsive Environments

Healthy living, however, is affected by all these skills together. The real breakthrough therefore lies in combining what they each have to offer and discovering what happens when they dance on the same page. Some knowledge fields face up to this situation better than others: in particular, there is much to learn from how specialist and generalist perspectives are combined in the practice of medicine. In the commentary that follows, we review ways in which design practice can be re-imagined to benefit from joined-up thinking at all scales: from design of natural infrastructure through to the details of building construction.



NATURAL INFRASTRUCTURE

There is plenty of evidence that contact with nature has positive health consequences. These are particularly significant in the context of anthropocene lifestyles, which raise inherent issues of both physical and mental health. In physical terms, health implications of over-consumption and under-exercise, such as increasing child obesity worldwide, threaten future levels of heart disease, diabetes and cancer. In parallel, mental disorders account for more of the global burden of disease than both heart problems and cancer.

Physical and psychological health are strongly connected: ultimately, there is no health without mental health. The state of the immune system is central to both: like physical health, psychological depression has been linked to inflammation of the physical immune system. Since experience of nature has been shown to enhance immune function, interactions with natural infrastructure afford wellness potentials in both physical and psychological terms.

To this end, Grange-in-the-Hedges reimagines the green system as a multi-scale, multi-function productive landscape, affording people everyday interactions with natural systems. Since all functions depend on biodiversity, local plant species and peripheral meadows create a Wildlife Recovery Network, linking the site into the wider landscape. Soil-to-soil agriculture, enabled by the provision of commercial orchards, community gardens and allotments, and local composting centres, offers a hands-on understanding of ecological processes: an invaluable foundation for creating ecologically aware lifestyles.



Fig. 5
Everyday life nestled in nature.
Source: EcoResponsive Environments

Extreme weather events will probably increase, so Grange-in-the-Hedges reimagines water cycles to be as local as possible; to slow runoff, maximise aquifer replenishment, and avoid flooding downstream, in order to ensure landscape security patterns, a precondition for healthy living, are fit for the future. This is achieved through swales in all the streets where topography allows, eventually draining into a series of retention ponds and wetlands, retaining excess flows, and creating biodiversity habitats. Water shortages and costs are minimised by treating and recycling runoff and domestic effluent as locally as possible through 'living machines' – constructed wetlands, which generate bathing-quality water, fertiliser, plants, fish and employment; all underpinning a productive landscape. Together, they result in everyday life experiences nestled in nature (Fig. 5).

‘Re-imagining green system as a multi-scale, multi-function productive landscape, affording people everyday interactions with natural systems.’

‘Re-imagining water cycles to be as local as possible to ensure that the landscape security patterns are fit for the future.’

STREET SYSTEM

From the early 20th century, the private car began to open up ever-increasing travel choices in people’s everyday lives. Policy evolved to favour car-centric developments with hierarchical layouts, prioritising the convenience and safety of car journeys. Widespread concerns about security – particularly in societies with wide income-disparities – led to the development of so-called ‘gated communities’, intended to exclude nonresidents. As an unintended consequence, this type of layout disadvantaged pedestrians who now had to follow longer, less direct routes, making car dependency the default setting for everyday life. Car dependency raises acute health problems today, ranging from carbon emissions contributing to climate change, to lack of natural exercise, social disconnection, traffic noise and particulate air pollution.

To turn the tables around, Grange-in-the-Hedges re-imagines the movement system as a highly connected, landscape integrated network that is convenient, safe and attractive for healthful walking, cycling and play. The aim is to construct a richer movement system that minimises car dependency, offering significant advantages in health, air quality and climate change.

Streets integrate existing planting with new trees, increasing both biodiversity and the restorative biophilic benefits of natural sounds, such as birdsong and rustling leaves, while improving comfort through evaporative cooling, and by controlling the impact of sun and wind. This green system also absorbs particulate air pollutants and reduces unwanted noise. Streets incorporate swales creating ‘ecology trails’ to show how natural systems work. On the main streets, traffic is slowed to cycle-friendly speeds through planting and limited on-street parking. Filtered permeability for cars, car clubs and bike hire encourage ride-sharing, minimising residents’ dependency on car ownership, and supporting the current trend towards fewer young people owning cars. Together, these design decisions foster the active lifestyles necessary for healthy living (Fig. 6).

‘Re-imagining the movement system as a highly connected, landscape integrated network that is convenient, safe and attractive for healthful walking, cycling and play. The aim is to construct a richer movement system that minimises car dependency.’



Fig. 6
'Prioritising convenience for low-energy,
low-pollution, healthful walking, cycling
and play.
Source: EcoResponsive Environments.

End of Part I.
To be continued.

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.

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