

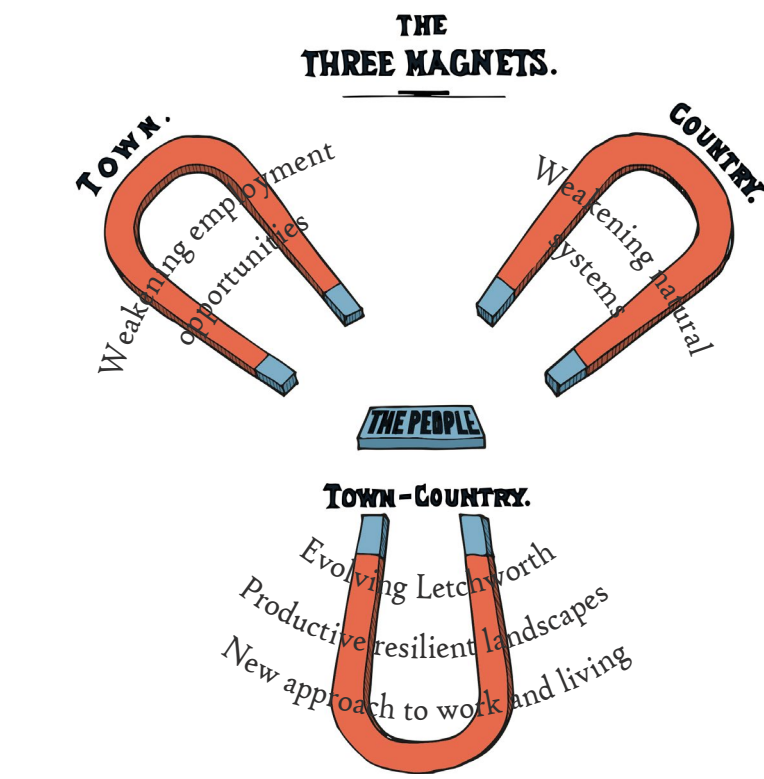


# O-MORROW 2.0

## EVOLVING LETCHWORTH

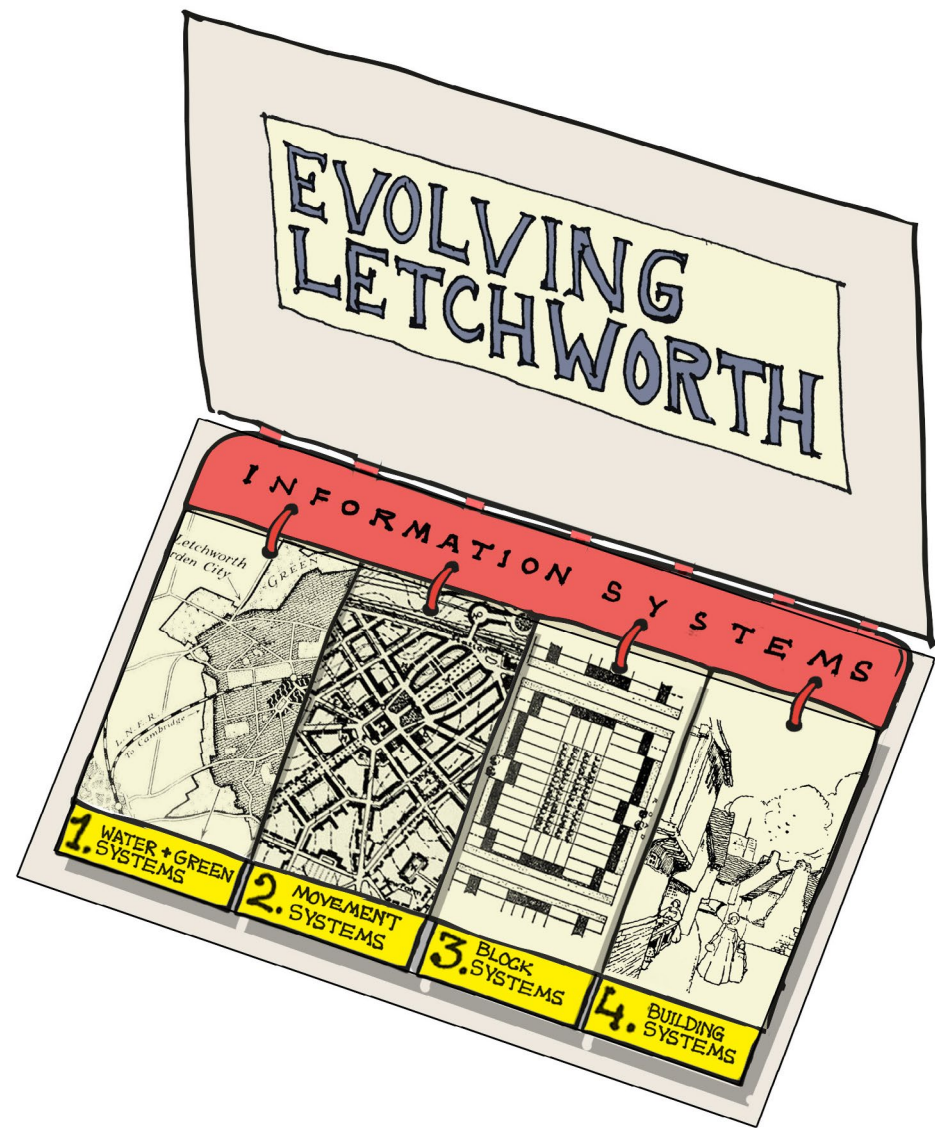
Designing to 'balance the most energetic and active town life, with all the beauty and delight of the country', Garden City pioneers transformed the lives of people attracted to towns in search of work, as technology eroded agricultural employment.

We now face a new tomorrow. Technology – through the top-down use of artificial intelligence – is eroding the security of most people's jobs (if you think this won't happen to you, dream on!) whilst climate change is eroding the human benefits that nature offers. With town and country magnets both losing their attraction, the Garden City approach must evolve to address Tomorrow 2.0.



## MULTI-SCALAR DESIGN APPROACH

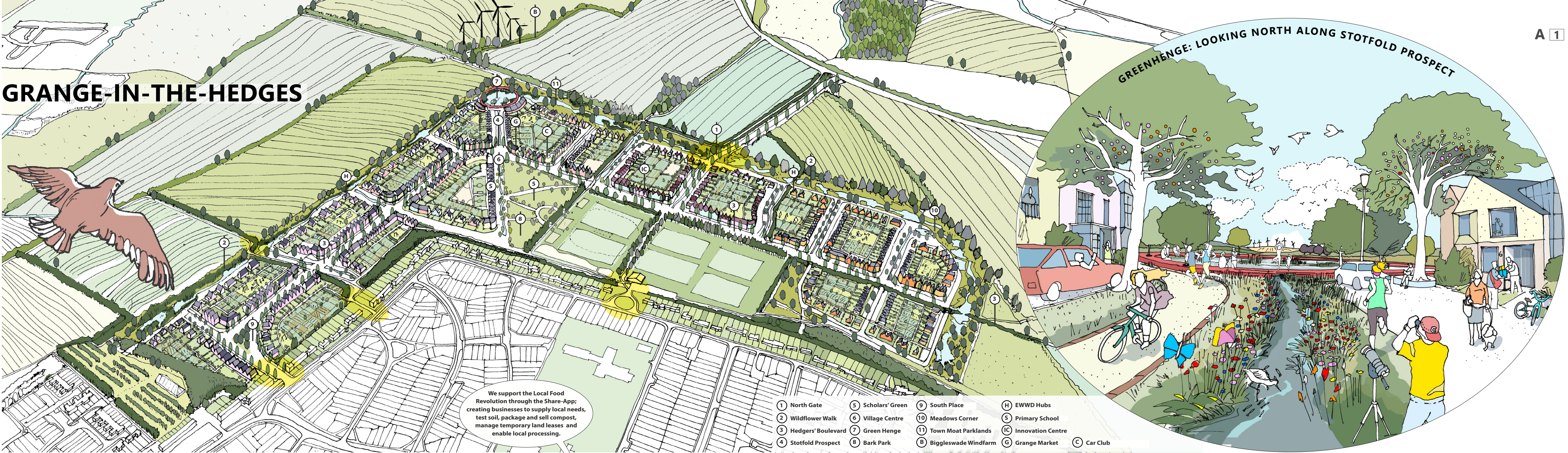
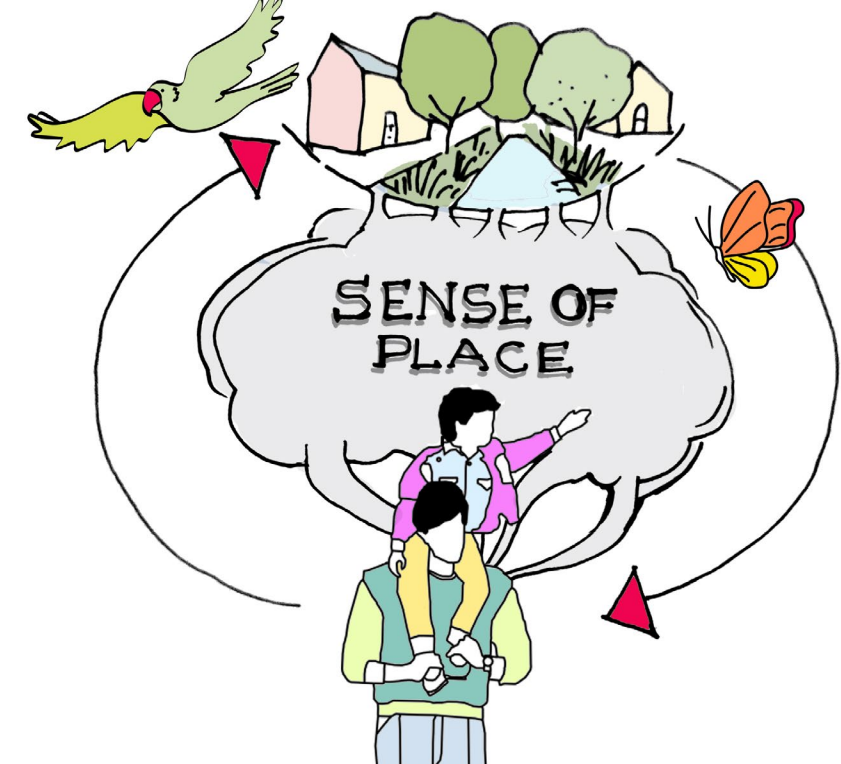
The Garden City's long-lasting success stems from the pioneer designers' embrace of complexity; weaving together natural landscape, public space, plots and buildings across multiple scales of space and time.



Grange-in-the-Hedges re-imagines this multi-layered approach. Water, green structure, human movement and development plots are interlaced with bottom-up information systems; challenging both underemployment and climate change to evolve a renewed Garden City fabric. 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 the existing people's interests.

## SENSE OF PLACE

People do not experience the multiple layers separately; what matters is the sense of place created through their relationships. This sense of place is particularly important to the public realm: the network of places that everyone shares. Overall, the public realm of Grange-in-the-Hedges seeks a general place-affinity with Letchworth. Within this, the identity of each particular street reflects and reinforces the particular role it plays in the whole; from relatively formal to relatively rustic.



### INTEGRATED INFRASTRUCTURE & INFORMATION SYSTEMS

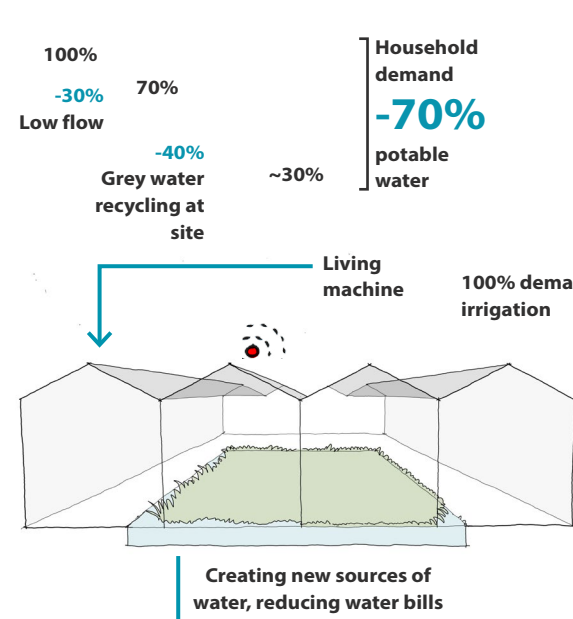
A micro community grid in the form of Energy, Water, Waste & Data Hubs stores, recycles and distributes resources across all scales of development, enabling a co-operative economy via Share-App.

**ENERGY, WATER, WASTE & DATA (EWWD) HUBS**

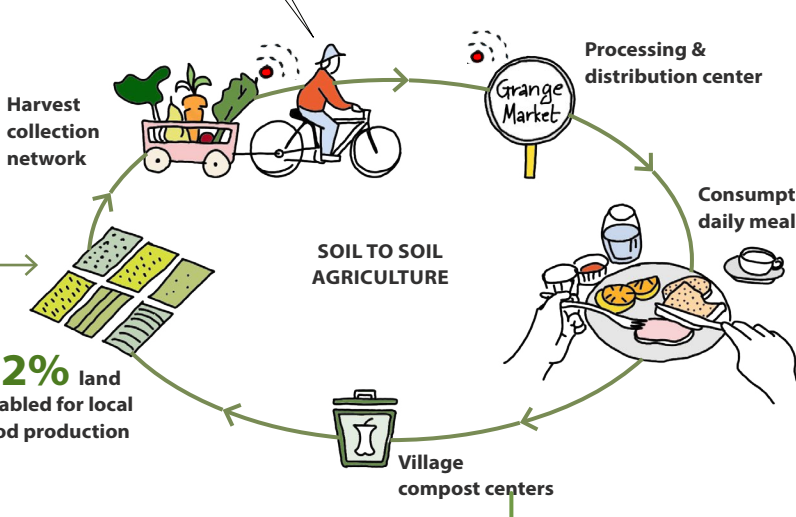
**PLOT SCALE**  
Decentralised: misses out on sharing of resources

**SITE & BEYOND**  
Centralised: High infrastructure laying & installation costs

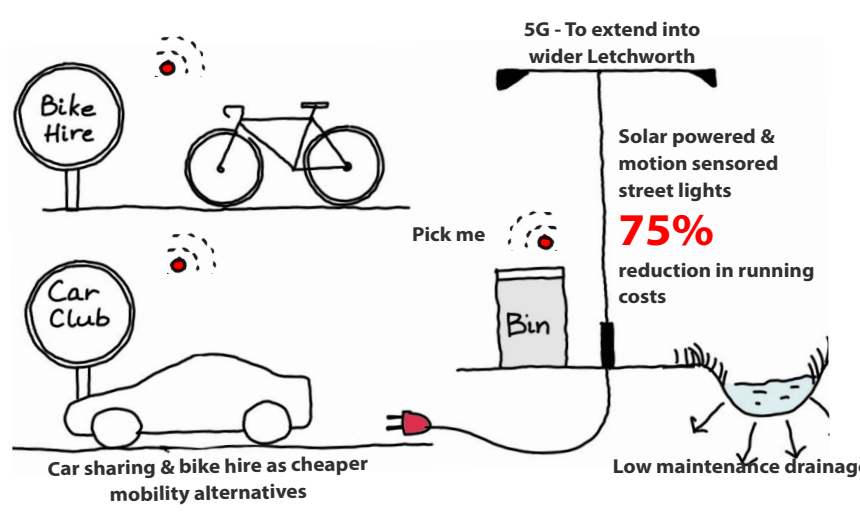
## MINIMISED WATER STRESS



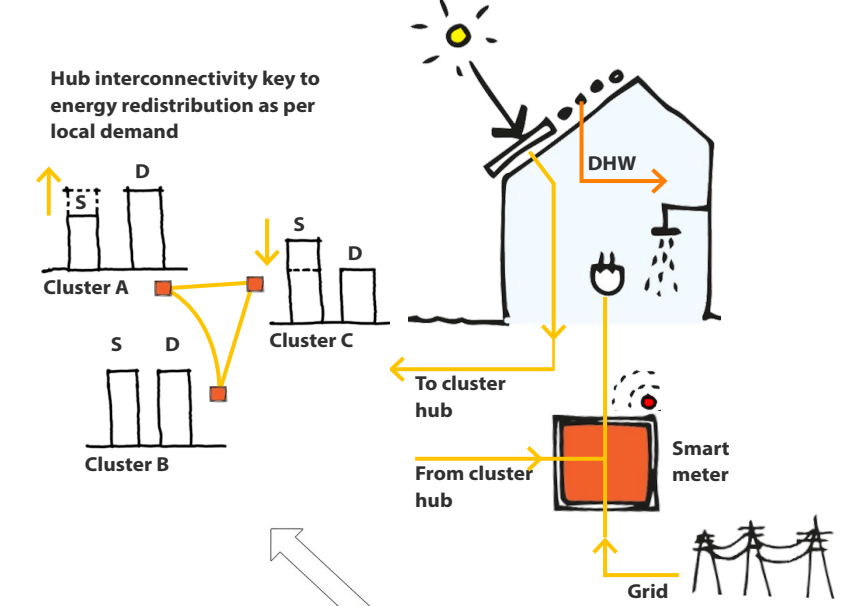
## MAXIMISED LAND PRODUCTIVITY



## MINIMISED UTILITY & TRANSPORT COSTS

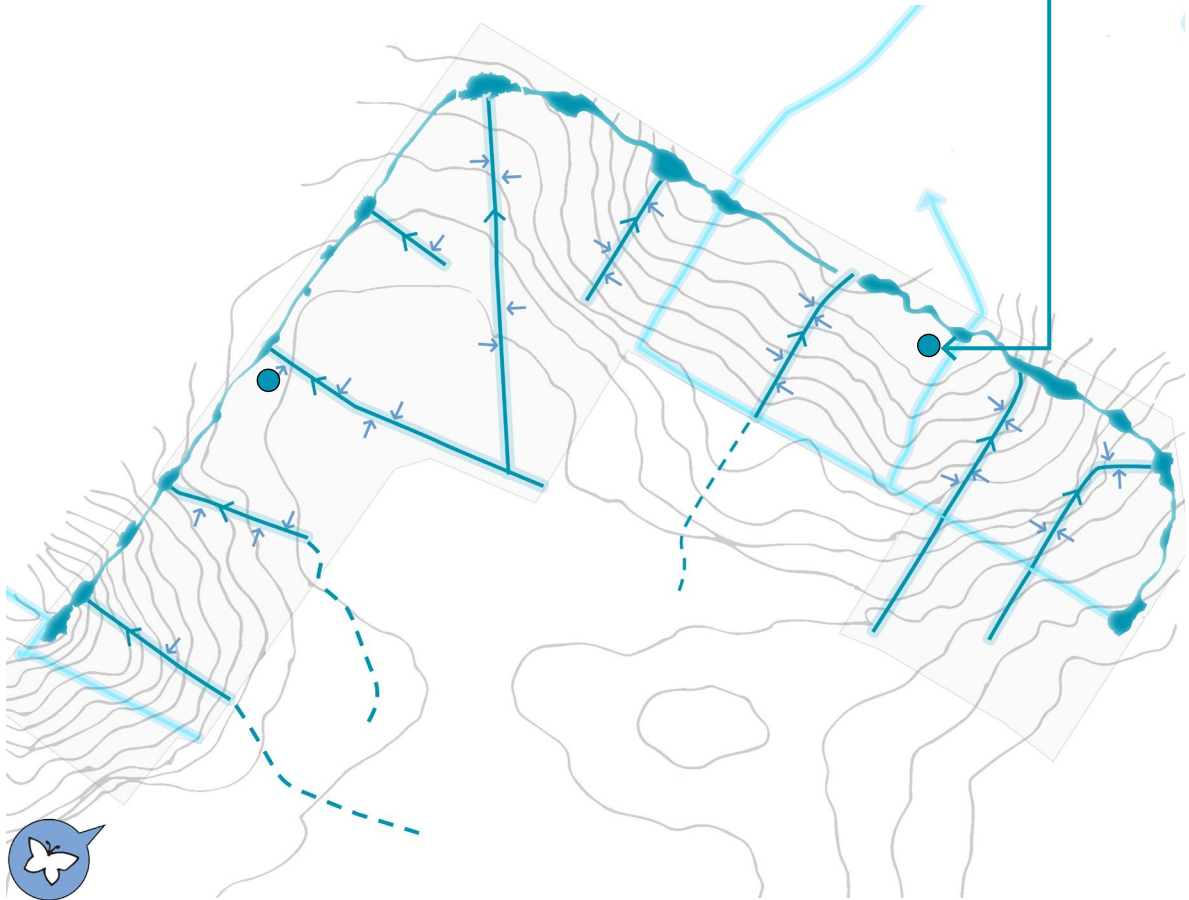
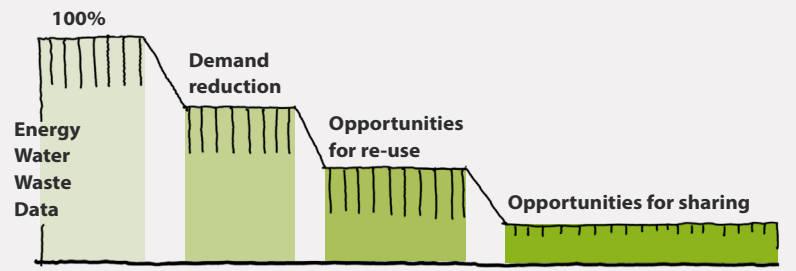


## MINIMISE DEMAND & MAXIMISE ON-SITE POWER GENERATION



## A COMMUNITY THAT SHARES

Considering data as 'currency', the idea is for residents to benefit from their own data. The Hubs and Share-App enable the residents to benefit from a variety of services in the fields of mobility, joint energy generation, retail and food production. The desired outcome is to increase quality of life and self-sufficiency of the community, by managing the basic facilities through technological innovations.



## THE WATER SYSTEM

Extreme weather events will probably increase, so we keep water cycles as local as possible to slow runoff from this rather impervious land, maximise aquifer replenishment and avoid flooding downstream. The countryside interface forms a Town Moat of ponds and wetlands; retaining excess flows and creating a habitat for great crested newts, defining a strong and permanent settlement edge. Water shortages and costs are minimised by recycling runoff and domestic effluent; treating polluted water as locally as possible through Living Machines – constructed wetlands – which generate bathing-quality water, fertiliser, plants, fish and employment, all underpinning a productive landscape. Share-app helps organise learning through nature walks and events.



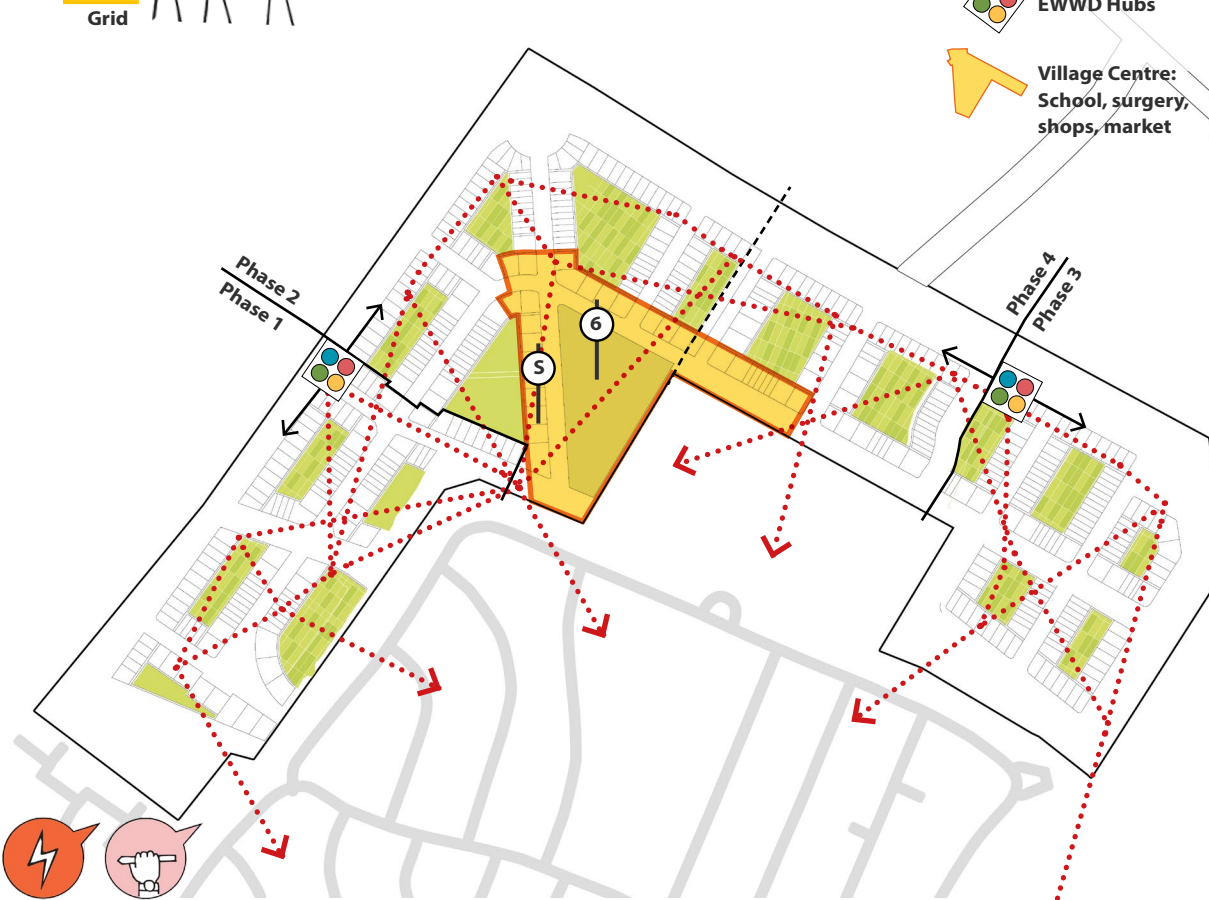
## THE GREEN SYSTEM

The green system forms a multi-scale, multi-function productive landscape. Since all functions depend on biodiversity, local plant species and peripheral meadows create a Wildlife Recovery Network, linking Grange-in-the-Hedges into the wider landscape through strengthened Greenway planting and Town Moat Parklands. All streets have trees, whose scale and spacing reflect the role each street plays in the overall movement system. At smaller scale, a new commercial orchard creates employment opportunities; whilst each block contains vegetable gardens and allotments; supported by waste-processing hubs powered by solar array. Share-App connects growers to under-used plots for a share of produce and organises the distribution network. Existing residents benefit from improved Playing Field; with better drainage, multi-use games area and new dog-lovers' bark park.



## THE MOVEMENT SYSTEM

A fine-grained, highly-connected street network minimises detours; encouraging walking and cycling, and minimising vehicle-miles. Streets align with those in Grange Estate, enabling pedestrian integration, if desired, when properties become available. The number of new residents enables a more frequent bus service. The Transport Hub's cycle hire and car club, supported by Share-App to encourage ride-sharing, minimises local residents' dependency on car ownership; freeing up surplus parking for productive uses. Traffic is slowed to cycle-friendly speeds through planting and limited on-street parking. Streets incorporate swales creating 'ecology trails' to show how natural systems work. The existing hedges weave through the development with light-touch pedestrian bridges for unobstructed wildlife movement and a permeable network for walking and cycling.



## THE BLOCK SYSTEMS

Distancing new blocks from Grange Estate protects existing residents' views and privacy. All residents benefit from the School, Village Centre and Scholars' Place. The new blocks are designed to create a friendly atmosphere in public space; supporting pedestrian safety through natural surveillance from building fronts. The EWWD (Energy, Water, Waste and Data) Hubs store and distribute solar energy from homes performing to passive standards, recycle bathing-quality water and produce compost to support urban farming. Located strategically at the junction, each Hub caters to two phases. Fresh food is grown in private gardens as desired, and in communal orchards and allotments. Communal gardens within each block, enclosed from the wider world, allow children the safety to socialise and play outdoors without constant supervision.

## HEDGERS' BOULEVARD AT THE VILLAGE CENTRE



## LOTS TO DO ON A SWALE STREET: LOOKING WEST ALONG FAIRFIELD VIEW



## THE RURAL EDGE: LOOKING DOWN MOATSIDE EAST

