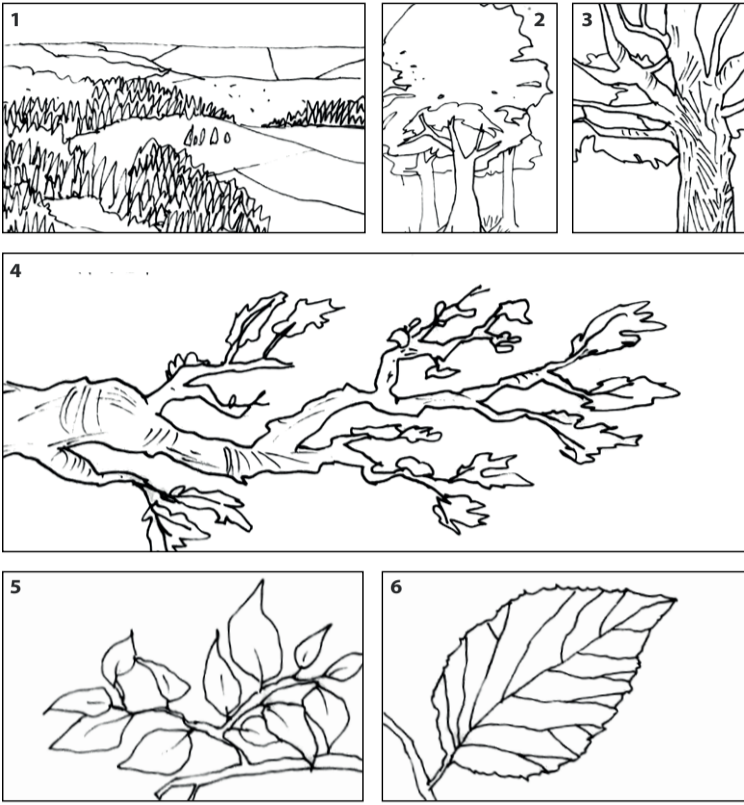


THE ART OF BUILDING A HOME

STARTING FROM NATURE

Evolving in a context of other natural systems, the human brain developed to enable easy processing of sensory information which is organised in nested scales: a forest has many trees, each with many branches, each with many twigs, each with many leaves, each with many veins.



LEARNING FROM NATURE

Feeling that 'nature can and does teach us more than any work of art', Parker and Unwin's designs learn from these multi-scale structures: streets have many buildings, each with many windows, each with many glazing bars, each enclosing close-up reflections, set in the smallest-scale texture of roughcast. Ours do the same, but with today's technology, supporting multi-scale experiences.

SCALES OF PERCEPTION

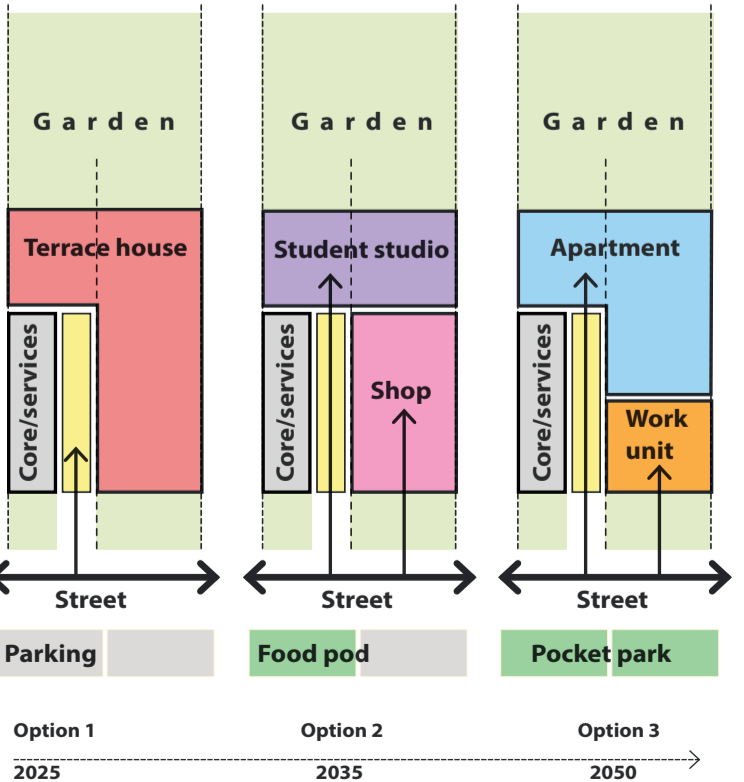
The range of likely viewing distances affects the range of scale at which richness must be considered. Where the surface will be seen at long range, large scale richness is necessary; whilst at close range richness must be achieved by small-scale elements and subdivisions. So to maintain richness from long-range to close-range we need a hierarchy of elements from large scale to small scale. We propose to do that same with the architecture for Grange-In-The-Hedges using contemporary materials, technology and aesthetic detailing.



ADAPTABILITY: THE TIME DIMENSION

Social and economic changes call for adaptable dwellings, to accommodate changing family arrangements and working from home. Services and circulation spaces, with fixed functions, are grouped together within a simple grid structure that supports easy reconfiguration of other internal spaces, and of the street interface in locations where business potential is highest. This allows each generation to update the building stock: meeting a range of needs.

The adaptability possibilities for a terrace house:



PLAYING AND WORKING IN THE COMMUNAL GARDEN



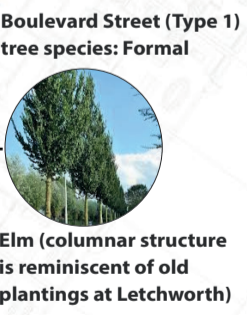
MULTI-SCALE OUTDOOR SPACE

Private gardens form outdoor rooms, with sheltered refuges giving onto longer views of communal gardens. These larger spaces enclose a smaller-scale structure of pedestrian walks, subdivided by pergolas and seating, defining areas for play and agriculture, further subdivided by orchard trees.

INDOOR & OUTDOOR RELATIONSHIPS

The spaces within the perimeter blocks afford opportunities for urban food-production; and offer suitable spaces for active, relatively unsupervised play in outdoor green environments, with health and socialisation potentials. So that all communal spaces will naturally attract a diverse range of neighbours, each block is surrounded by a mix of dwelling types and tenancies. Dwellings relate to the streets to maximise natural surveillance without compromising private activities within the home.

- Bus stop
- Cluster scale communal garden shed
- Wooden beehive with auto honey flow
- Allotments
- Games area or courts
- Children play area
- Space to socialise and host events
- Fruit trees
- Pergola with roses
- Private back gardens



LOCATION, LOCATION, LOCATION

Homes are positioned to capture the maximum social and economic value from each plot, depending on spatial connections with the rest of Letchworth. Space syntax analysis reveals the relative connectivity of our streets; predicting the relative intensity of traffic they carry: the busiest streets have the hottest colours. Low traffic flows maximise safety for larger families with children. Locations with medium flows suit smaller households, mostly adults and infants. The busiest streets maximise accessibility, 'buzz' and passing trade: good for smaller apartments and non-residential uses.

PLACES FOR EVERYONE IN 'THE GREAT HALL'

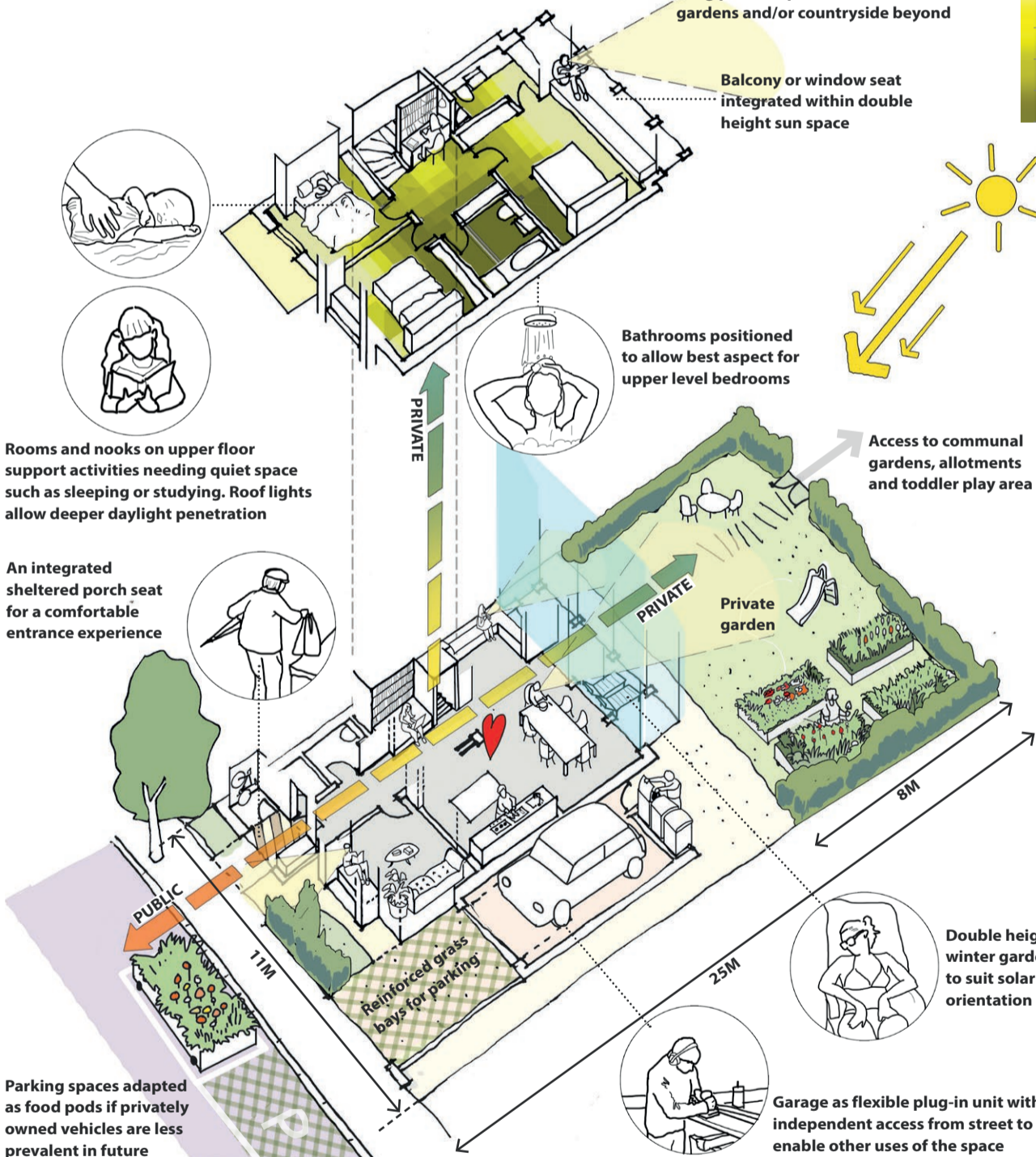


MULTI-SCALE INTERIOR SPACE

Within the buildings, living spaces are related to services and circulation spaces in ways that encourage subdivision and combination; to support changing configurations as family structures respond to pressures such as inter-generational living, or the need to provide spaces for carers. Learning from the 'great halls' of Parker and Unwin houses, larger open plan living spaces each benefit from multiple smaller-scale focal places such as nooks, bays and window seats; framing the details of people's own belongings, and providing glimpses into other spaces and out to gardens. Such conditions create appropriate settings for a wide variety of individual activities to take place together, against the tide of increasing isolation.

LAYOUT PRINCIPLES FOR A HOME

Home design is the art of balancing individual privacy with family togetherness. Overall, spaces have increasing privacy according to distance backwards and upwards from the street. At smaller scale, spaces have focal places - nooks, bays, window seats - that foster togetherness by enabling family individuals' activities to take place at the same time.



TYPE 1

Smaller family homes (terrace house; 2-3 bed), with parking for residents and visitors on reinforced grass bays on-street, between trees.



TYPE 2

Larger family homes (detached or semi-detached; 3,4 & 5 bed) with on-plot parking in garages; which have further spaces in front. Garages may convert into extra rooms.



TYPE 3

Multiple tenancy homes (dual aspect apartments; 1-2 bed) with on-plot parking which can become extra garden space or farming pods for rent.

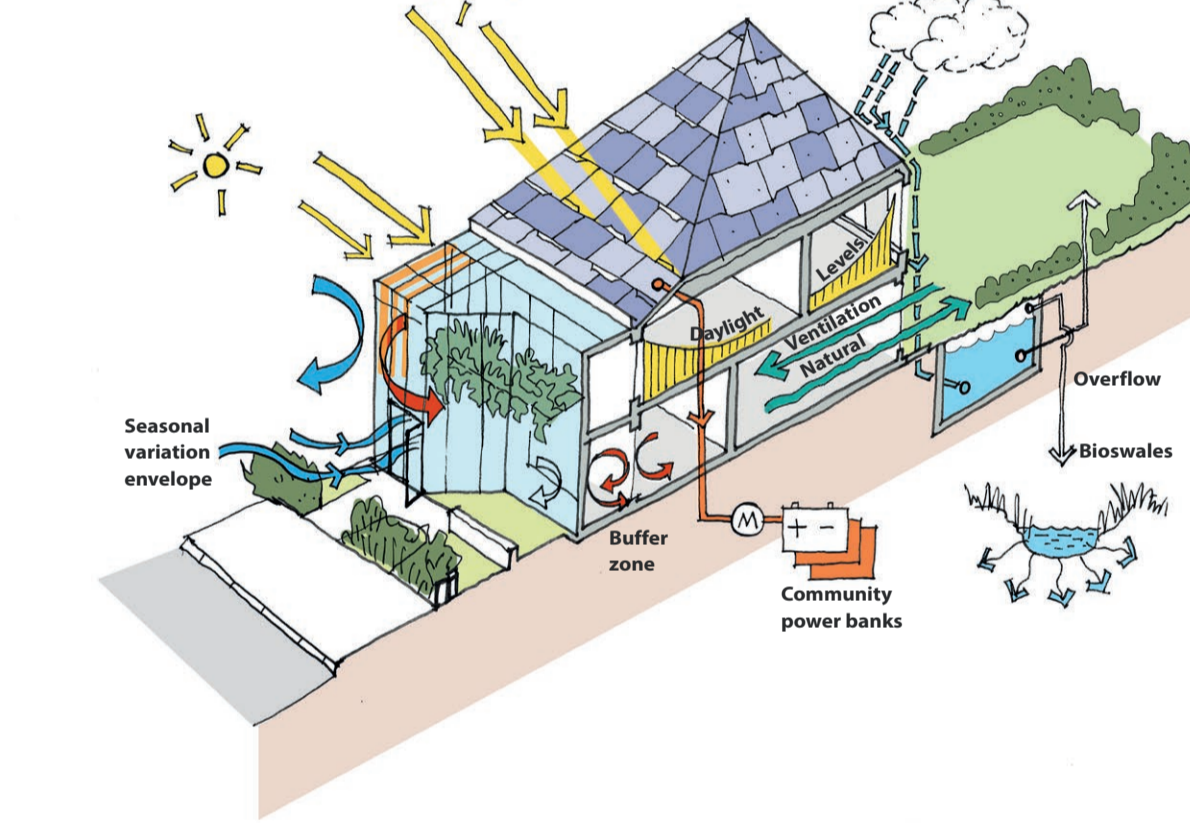


ENVIRONMENTAL PERFORMANCE & CONSTRUCTION SYSTEMS

The buildings are designed to benefit from minimum energy demand; maximum use of natural resources such as solar orientation and water, a fabric first approach, and efficient systems that minimise operational energy. Proposed build system is predominantly timber and cellulose based with low embodied energy and delivers minimal environmental impact through the build process. Precise factory manufacturing, minimising construction waste, site time, noise and disruption, allows quality control, performance testing, and incorporation of integrated building management systems complementing passive house technology.

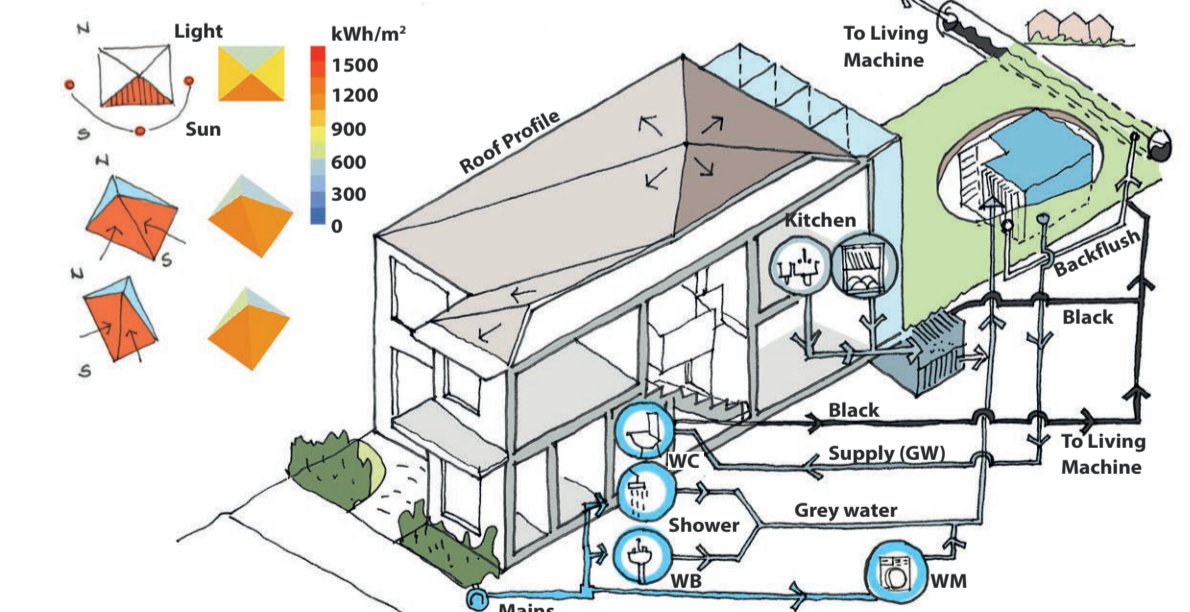
CONTEXT & CLIMATE RESPONSIVE DESIGN FOR DEMAND REDUCTION

Illustrated for Type 1: Terrace house



MAXIMISING REUSE & RECYCLING OF NATURAL RESOURCES

Illustrated for Type 2: Larger family dwellings



MINIMAL OPERATIONAL ENERGY THROUGH EFFICIENT SYSTEMS

Illustrated for Type 3: Apartments

