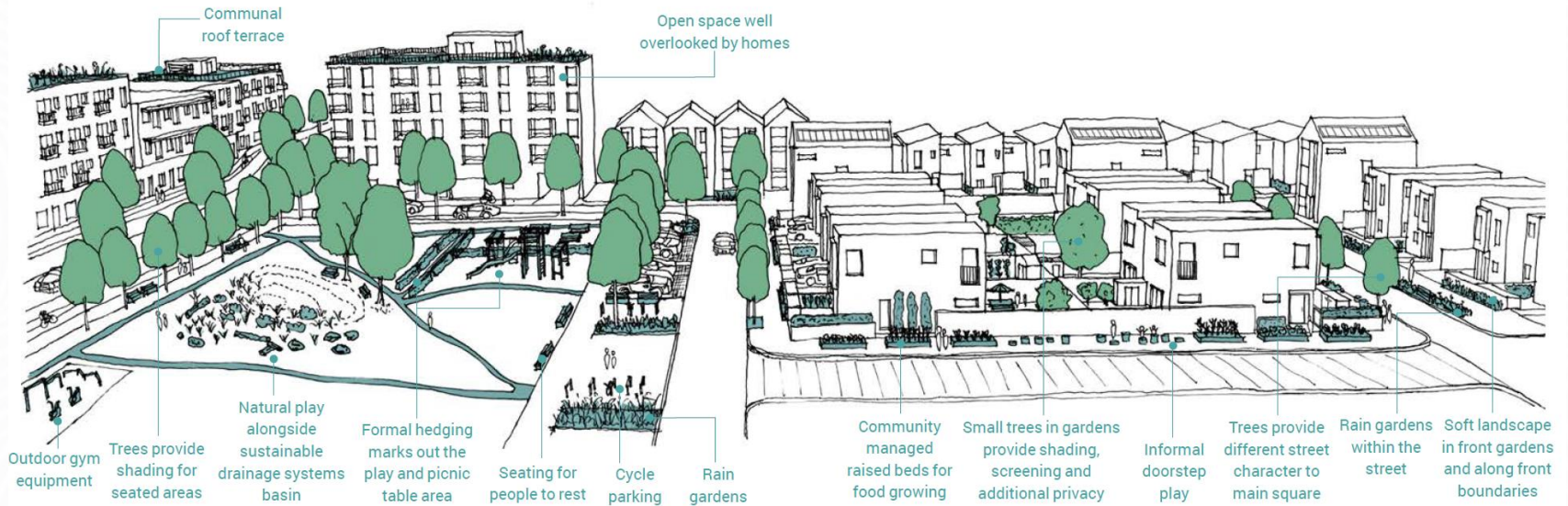


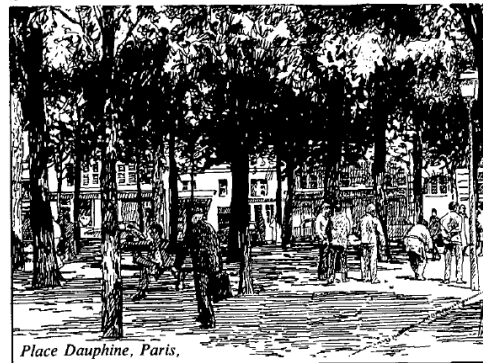
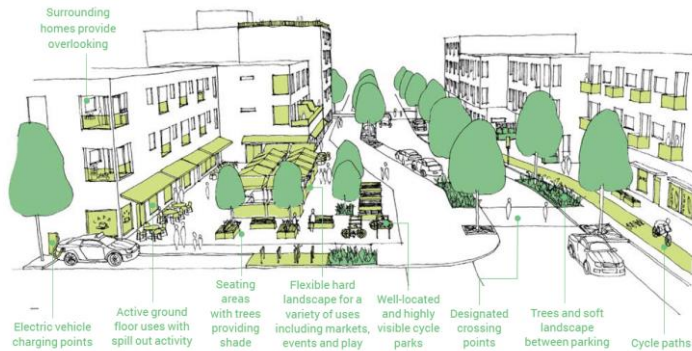


# Green Infrastructure and Trees Taylor Wimpey Perspective

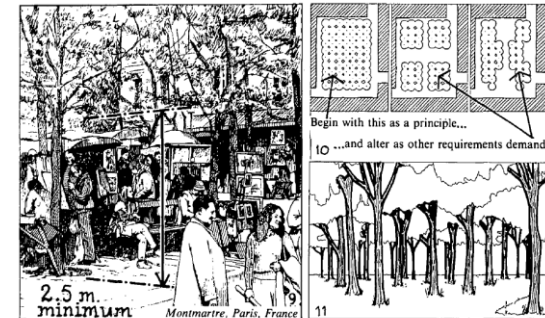


### The importance of microclimate

Finally, activities out of doors need appropriate microclimatic settings. These are covered in Design Sheet 4.11.



... IN THE TOWN SQUARE, SUNLIGHT AND SHADE COULD BE FOUND AT THE SAME TIME + PLACE



Trees can form smaller enclosures within the main space: like edges, these can provide the combination of refuge and prospect which encourages people to claim the space. The base of the tree canopy must be at least 2.5 metres above ground level (9). To make a robust series of spaces between trees, plant them on a roughly square grid about 5 metres apart. This will form the outdoor equivalent of the 'average sized rooms' discussed in Design Sheet 4.5, each capable of supporting a wide range of activities without obstructing pedestrian movement. Do not worry that a grid pattern will seem monotonous: it is simple in plan, but complex in perspective (10,11).

# Taylor Wimpey

## A Guide to Green Infrastructure



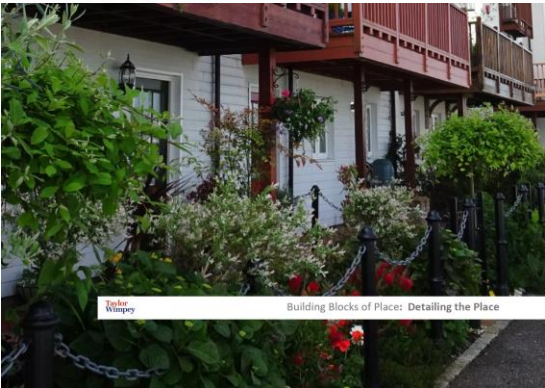
A Guide to Green Infrastructure



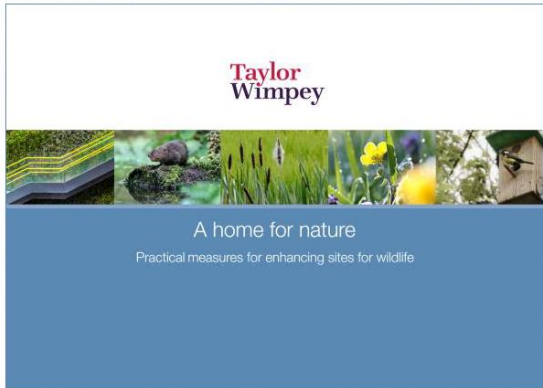
Taylor Wimpey Compendium of Buildings Blocks of Place: **Parking** ISSUE 1



Taylor Wimpey Buildings Blocks of Place: **Plotting** ISSUE 1



Taylor Wimpey Building Blocks of Place: **Detailing the Place**



### A home for nature

Practical measures for enhancing sites for wildlife



Taylor Wimpey Building Blocks of Place: **Streets**

## OUR OBJECTIVES

Well-designed green infrastructure and trees can help us to deliver our strategic priorities :

- Better quality places.
- Better values and reduced costs .
- Better sales performance by Improving the setting of our homes
- Well-integrated developments that provide safe and accessible space for all.
- Quick, more easily implemented planning consents.
- Our corporate social responsibility to reduce the environmental impact of developments and mitigate climate change .
- Create environments that encourage residents to adopt healthy lifestyles.

Many of the objectives above are interconnected. Carefully-considered and well-designed green infrastructure will allow us to meet these objectives without additional cost and effort. In turn, this will help us to deliver our strategic priorities by giving us a competitive advantage and enhancing our reputation amongst landowners, planners, customers and other stakeholders .

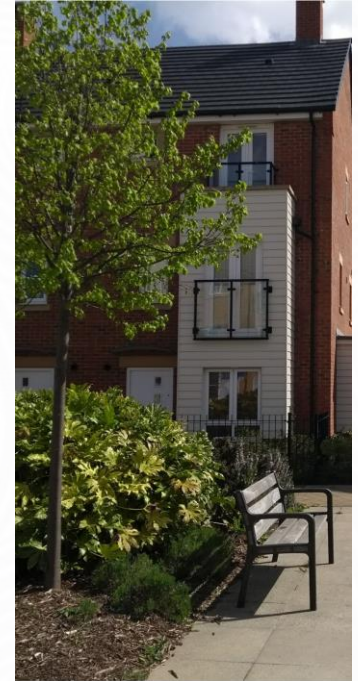


## PLACEMAKING



Green Infrastructure and trees helps places to be :

- Welcoming
- Adaptable
- Safe and Pleasant
- Distinctive
- Resource Efficient
- Legible
- Healthy
- Etc



Trees have the added benefit of creating attractive, healthy and legible places for our customers with a great sense of place and address.

# HOW CAN WE DELIVER HIGH-QUALITY GREEN INFRASTRUCTURE



Setting up the project

Understanding the site and identifying requirements

- Architect/Urban designer/masterplanner
- Landscape architecture
- Ecologist
- Planner
- Engineers

- Site surveys
- Policy review
- Opportunities and constraints
- Character Appraisal



- Architect / Urban designer / masterplanner
- Landscape architecture
- Ecologist
- Planner
- Engineers

Creating a strategy



- Landscape architecture
- Engineers

Detailed design



Delivery

## DESIGNING GREEN INFRASTRUCTURE WELL

Green infrastructure should be:

- multifunctional;
- well connected;
- technically competent;
- distinctive;
- environmentally responsible;
- biodiversity-friendly;
- accessible and safe;
- attractive;
- high early impact; and
- robust and long-lived.



Sites	JRUD	TW	Average TW+JRUD	Homeowners	EMEC Final Value
Cameron Gardens, Bilston				n/a	92.31
Leybourne Chase, West Malling					28.67
Church Fields, Boston Spa					143.87
Lawley Farm, Telford					n/a
Cunningham Grange, St Helens					n/a
Dean's Acre, Bishops Cleeve					n/a
Atrium @ GWP					32.5
Great Hall Park, Ellesmere Port					25.56
Abbotswood, Romsey					n/a
Wembdon Grange, Bridgewater					n/a
Old Kiln Lake, Chinnor					37.27
Swallows' Nest, Coventry					n/a
Kings Quarter, Chiselhurst					n/a
Newton Farm, Cambuslang					n/a
Waterside Grange, Langley					11.98
The Wheatfields, Burton Latimer					50.5
Weavers Gardens, South Normanton					18.49

	Excellent	45-48
	Good	41-44
	Average	33-40
	Below average	25-32
	Poor	16-24

Excellent	81+
Good	61-80
Average	41-60
Below Average	21-40
Poor	0-20



## Church Fields, Boston Spa – Excellent Example



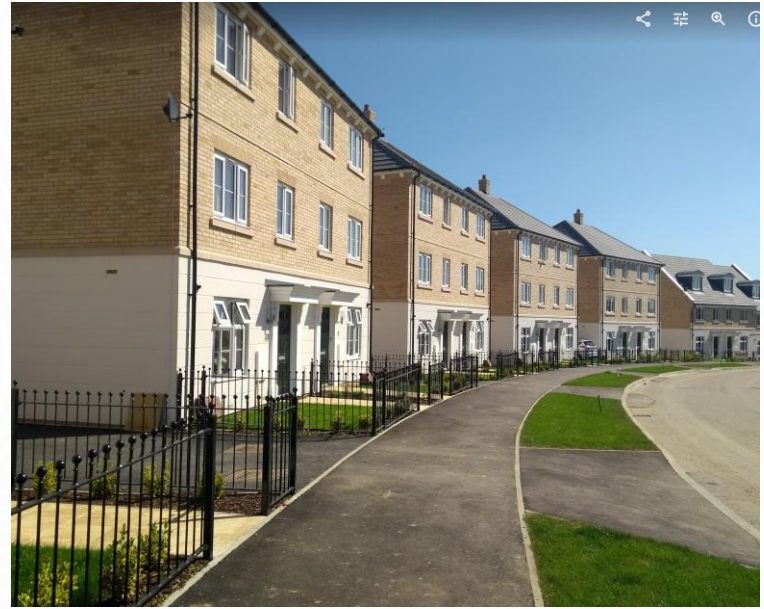
## Weavers Gardens, South Normanton – Poor Example

















## Some feedback of threat to street trees as reported by BUs.

- Street lights required to be off set 10m
- Utility, drainage, services
- Connections of utility to private plots
- Verges too small
- Visibly splays- highways favourite
- Visitor parking bays on street
- Local Planning Authorities vs Highways and Adoption Authorities - no agreement.
- Urban Creep- Residents removing everything for parking and driveways
- Species approved by local authorities – inappropriate, not all local species are suitable...
- Planting in private gardens- 5 year maintenance
- Most semi mature trees are imported
  
- And last, but not least- excessive commuted sums!

## It's important stuff

Landscaping within streets and developments plays multiple roles:

- Helps to define route hierarchy
- Soften an otherwise potentially hard environment
- Can improve air quality
- Can contribute towards a biodiversity, ecology and wildlife strategy
- Provide food for residents and workers through edible planting
- Raise spirits and improve health and well being
- Provide visually attractive interludes within the streetscape
- Provide shade and help prevent overheating of buildings
- Contribute towards sustainable urban drainage

Landscaping is, therefore, vital to the health and vitality of our streets.

The type and character of the landscape, be it avenue street trees or shrubs and hedging to help break up parking, will be dependent on the type of development and the design character of the masterplan. All landscaping should, however, be robust and design choice should have regard to future maintenance and the suitability of species to the proposed situation. We would welcome early conversations with the schemes landscape architects to help ensure that designs coming forward meet with our approval.

Note: Trees / landscaping within the highway corridor will need to be adopted - private trees covered by license or adoption layout amended to create unadopted islands is not acceptable.

It should also be noted that vision splays / forward visibility etc. are required to be adopted for adopted roads. These areas will also need to meet adoptable standards (i.e. landscaping will be adopted).



Landscaping can add structure to a streetscape



Tress helping to soften an otherwise hard environment

## Street trees guidance

OCC welcomes a diverse and creative approach to providing trees in our county. Trees have a range of environmental, economic and social benefits which should be utilised to the full to provide a lasting landscape fit for the environmental challenges we face.

### Design

The overall design should reflect the landscape around it while giving a sense of place to the site to differentiate it from other areas.

Certain points need to be considered in drawing up the design:

- Trees need to be suitable for the location and available planting area including future growth of roots and canopy.
- Sufficient light and water needs to be provided to ensure healthy growth.
- Where trees are part of drainage schemes then species able to cope with the volume of water anticipated should only be considered.
- Retaining existing trees within the site. Surveying to BS5837(2012) is required with an Arboricultural Method Statement (AMS) stating which trees are to be retained or removed; how they are to be protected during

construction; and what after care will be provided to ensure long term retention.

- New trees should have detailed specifications on sizes and species, planting methods and after care for a minimum of 3 years to ensure establishment.

### Species selection

There are many guides to trees describing their attributes, but it is notable that many designs choose the same species. As the climate changes, our choices should change to reflect that and ensure future adaptation.

- A mix of species is required with no more than 20% of any genus and no more than 10% of a particular species on the site. This is to prevent major impacts on the landscape in event of disease.
- Ideally a range of ages should be planted to prevent all trees aging at the same rate and gaps occurring when they die.
- Consideration should be given in communal areas to providing edible fruit producing trees, bushes or herbs to provide a sense of community and giving children access to a natural experience.

### Planting space

While trees can make a space more inviting they can cause problems to those living nearby and be a long-term safety hazard if given insufficient room to develop.

- Trees should have sufficient space above and below ground.
- Canopies develop over time and may even change shape as they age, depending on whether they are obstructed, shaded or free grown. Future pruning and maintenance must be anticipated including the maintenance costs. Pruning can affect a tree's long-term retention.
- Below ground roots need sufficient volume to develop a healthy root system capable of supporting the tree and providing good stability in the long term.
- The impact of kerbs, paved areas and rooting barriers must be carefully considered before selecting a tree to suit.
- It may be that the site is not able to support a mature tree and other more appropriate landscaping should be used.

## SHEET 4

UPDATED HORTICULTURE		RATE		MEASURE	
		£	per	Quantity	Cost
					£
<b><u>ANNUAL MAINTENANCE</u></b>					
1	Trees	10.00	item		-
2	Shrub planting	5.00	m2		-
3	Hedges	1,000.00	item		-
4	Hard paving / art	1,000.00	item		-
5	Street furniture	1,000.00	item		-
6	Grass	3.50	item		-
9	Litter Pick	10.00	item		-
<b>Payment required</b>		<b>A</b>			-
<b><u>REPLACEMENT COSTS</u></b>					
1	Trees	2,050.00			-
2	Shrub planting	10.00			-
3	Hedges	0.00			-
6	Grass	1.50			-
<b>Cost of reconstruction</b>		<b>R</b>			-



Quality Green and trees allows us to deliver a more attractive development to our customers, while making better use of our land

- 

Done properly it will help us to deliver our strategic priorities by giving us a competitive advantage and enhancing our reputation

- 

Green Infrastructure 'Ecosystem services' are the functions provided by ecosystems that make human life possible and worth living, such as flood regulation, water purification, and recreational and health benefits

- 

It help us mitigate environmental damage and improve biodiversity