




**Sustainable Suburbia**  
Suburban Housing Densities Reassessed

MacCormac, Jamieson Prichard  
9 Heneage Street, Spitalfields,  
London, E1 5LJ  
T. 0207 3779262  
F. 0207 2477864  
E. mjp@mjparchitects.co.uk

MACCORMAC  
&  
JAMIESON  
&  
PRICHARD

### SUBURBIA AND DENSITY

- **Transport** - walkable neighbourhoods can be dense enough to support public transport.
- **Economics** - infrastructure costs per household tend to be lower in higher density developments.
- **Environment** - more compact developments leave more land available for recreation, agriculture and wildlife.
- **Society** - higher densities have been reported to be associated with a better 'sense of community'.




San Francisco 50 dph  
Lyon 93 dph  
Kowloon 1250 dph

### DENSITY AND THE SUBURBAN LIFESTYLE

**PRIVACY**


- individual front door
- private open space
- off-street parking
- plenty of storage
- not overlooked/ a good view
- quiet and privacy within home
- quality of design and materials generally
- security/ 'a defined perimeter'




Choosing suburbia is often an aspiration for a type of lifestyle

**COMMUNITY**

- low traffic levels/speeds
- good roads
- good schools/other public services
- safety, a low crime rate
- high quality, well maintained public open space
- pedestrian access to social amenities
- diversity of incomes/backgrounds (provided that perceptions of security and safety are favourable)
- 'social capital' and 'a sense of community'
- 'identity' and 'sense of place'
- good public transport
- location: access to local/regional urban centres, access to employment, access to countryside




Low density suburban dwellings offer a defined perimeter and private open space



Higher density neighbourhoods can more easily incorporate high quality, well maintained public open space

### TWO NEIGHBOURHOODS COMPARED




Density: 25 dph net (125 bph)

**Greenleys, Milton Keynes**

% Roads	: 20
% SLOAP	: 40
FAR	: 0.4
Off-street parking	: 100%

- Cul-de-sacs impede pedestrian movement – green buffers along roads reduce perceived safety of pedestrian environment, and contribute to social discontinuity and isolation
- Arterial road layout leads to bottlenecks on feeder roads
- Very inefficient in terms of land in private use
- Road systems and open space patterns across the whole settlement reduce gross density to perhaps 70dph

### TWO NEIGHBOURHOODS COMPARED



Density: 52 dph net (260 bph)

**Wolverton, Milton Keynes**


- Density sufficient for walkable community
- Urban design mitigates impact of density: grid of streets reduces congestion, cars and parking in back alleys permits well-defined street frontage with 'eyes on the street'
- Street system allows density to be sustained across the settlement

**Wolverton, Milton Keynes**

% Roads	: 20
% SLOAP	: 0
FAR	: 0.4
Off-street parking	: 100%

- Higher property value than Greenley MK 'car' suburb, even though density is double

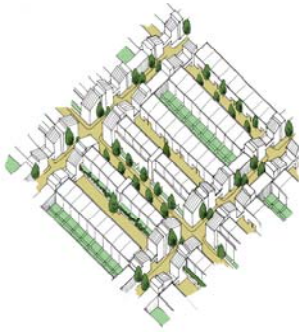
### TWO STUDIES : HOUSING AND BLOCK LAYOUT



1. Courtyard Housing

Density:	57dph net
	285 bph net
Housing Mix:	100% 3b 5p houses
Storeys:	2
Off Street Parking:	100%
Proportion of Road:	36%

## TWO STUDIES : HOUSING AND BLOCK LAYOUT

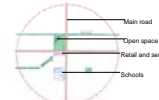


2. Mews Housing with terraced maisonettes
- Density: 111dph net\*  
528 bph net\*
- Housing Mix: 43% 3b 5p houses  
24% 3b 5p maisonettes\*  
12% 2b 4p maisonettes\*
- Storeys: 2/4
- Off Street Parking: 94%
- Proportion of Road: 35%
- \* The proportions and dwelling types can be varied

## A COMMUNITY OF 5,000 DWELLINGS



1. Area of 600m radius (10 minute walk) = 113ha



2. Infrastructure for 5,000 (see left) = no. of homes needed To make local transit viable

Infrastructure / 5,000 homes			
	#	ha(net)	
Health Centre	1	0.33	
Primary School	2.5	1.88	
Secondary School	0.5	1.76	
Nursery School	2.5	0.11	
Library	0.5	0.03	
Leisure Centre	0.5	0.2	
Playing Field	1	1.86	
Local Store	1	0.65	
Main Access Roads	n/a	4.0	
Open Space	n/a	4.0	
<b>TOTAL</b>		<b>13.0ha</b>	



3. 100 ha housing @ 50 du/ha = 5,000 homes

- Research by the DETR and others suggests that in order for a regional transit link to be viable, you have to have 5,000 dwellings within a 10minute walk (or a 600m radius).
- Subtracting an allowance for space dedicated to community facilities, open space and major streets (based on LDA estimates), we are left with 100ha.
- So in order to accommodate 5,000 dwellings, you would need an average density of 50du/ha.
- This establishes an important threshold density for a walkable suburb.

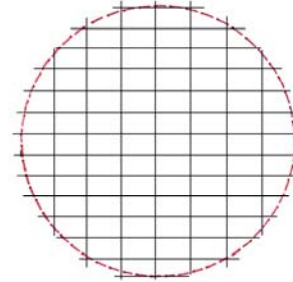
**50 du/ha = critical density for a walkable community**

## A COMMUNITY OF 5,000 DWELLINGS



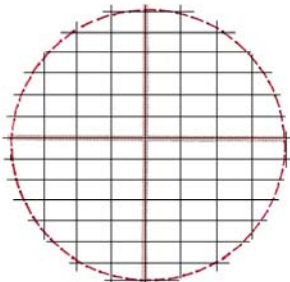
The Walkable Community

## A COMMUNITY OF 5,000 DWELLINGS



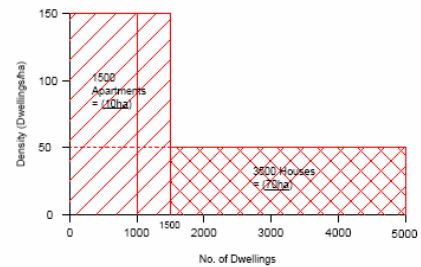
Planning Grid

## A COMMUNITY OF 5,000 DWELLINGS



Principal Streets

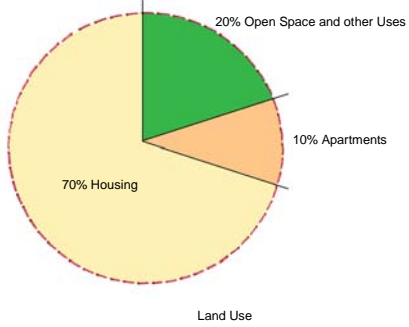
## A COMMUNITY OF 5,000 DWELLINGS



**= 80ha built area**

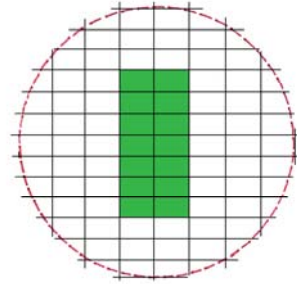
A Mix of Dwelling Types

A COMMUNITY OF 5,000 DWELLINGS



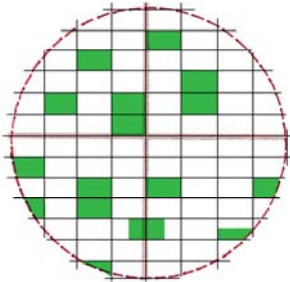
Land Use

A COMMUNITY OF 5,000 DWELLINGS



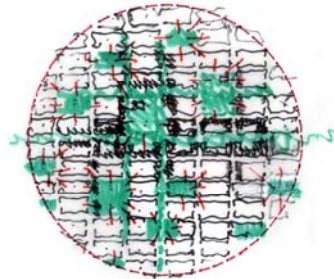
20% Open Space

A COMMUNITY OF 5,000 DWELLINGS



Open Space Distributed

A COMMUNITY OF 5,000 DWELLINGS

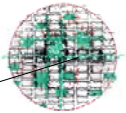


A Variety of Spaces

A COMMUNITY OF 5,000 DWELLINGS



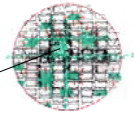
Examples : Public Transport



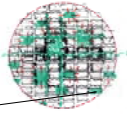
A COMMUNITY OF 5,000 DWELLINGS



Examples : Market Square

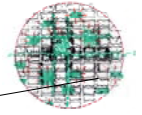


A COMMUNITY OF 5,000 DWELLINGS



Examples : Communal Gardens

A COMMUNITY OF 5,000 DWELLINGS



Examples : Residential Play Streets