



Working Paper  
**Net density and Gypsy and Traveller sites  
in London**  
v.01

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## Introduction

This paper hopes to illuminate two issues:

- the density of new Gypsy and Travellers site developments, and
- one aspect of the nature of London's existing sites.

First: Density is a fundamental tool for town planning – how much land should be allocated to such-and-such a use? It was entirely understandable that planners asked, at a recent meeting with LGTU, what the acceptable density of site development might be.

So the Government's report *Designing Gypsy and Traveller Sites - Good Practice Guide* [DCLG. 2008a] was not helpful when it studiously avoided any mention of density. This probably mirrors the attempt in PPS3 to encourage localised policies on residential density<sup>1</sup> [DCLG 2006a]. But might it also reflect a lack of knowledge<sup>2</sup> on the density of existing and new sites? This paper has such a possibility in mind.

Second: Density says something about life on sites. One way of beginning to build up a picture of the nature of site provision is to ask about pitch sizes and site densities. Is there any greenery? Is there space to swing a cat?

This paper looks at the density of *itches* rather than caravans or people for two prosaic reasons:

- The data on pitch numbers is substantially robust, at least on Council and Housing Association sites. The counts of caravans are, on the other hand, suspect<sup>3</sup>: London's data implies strongly that the returns are largely arbitrary. And there simply are no secure counts of residents by site.
- The planning targets for Boroughs will be in terms of *itch* numbers.

This paper uses the measure of *net* density which is generally used for bricks and mortar dwellings: It is planner-speak. Broadly speaking it takes into account the whole area of the development site including on-site roads and shared or ancillary space.

A hectare is roughly 100 yards by 100 yards, or 2½ acres.

'Pitches per hectare' is abbreviated to **ppha**.

There is much more to be considered in site design than is covered here. Pat Niner [2003] and DCLG [2008a] are both essential reading.

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<sup>1</sup> Although it does state: "Local Planning Authorities may wish to set out a range of densities across the plan area rather than one broad density range although 30 dwellings per hectare (dph) net should be used as a national indicative minimum to guide policy development and decision-making, until local density policies are in place. [DCLG 2006a.:para47]

<sup>2</sup> Pat Niner does not directly mention density in her exhaustive 2003 study of sites in England.

<sup>3</sup> This recent mail in response to a query about a 30% increase in caravan numbers illustrates the issue: "I have spoken to the person who completes the count, and I think the method of counting has changed (for one reason or another), in that he now counts all mobile 'structures' on our sites and not just those that are used primarily for living in. In other words there are a number of smaller caravans on the sites, belonging to families occupying individual pitches. The number of pitches has not changed and neither has the number of households occupying them - except a small increase in households on one particular site."

## 1 Summary

Suggested net densities for new Gypsy and Traveller sites lie in the range 21-29 pitches/ha (ppha), say 25 ppha if one figure is needed. Smaller, awkwardly shaped sites can drive densities down. New sites in Inner London Boroughs have densities of 14-25 ppha.

Improved fire regulations and access standards, and larger pitches have reduced densities over time. The densities of London's older sites, developed between 1968 and 1997, average out at 34 ppha (Inner London) and 31 ppha (Outer London). Inner London sites vary widely from 18 to 55 ppha. It appears that this is primarily down to variations in the pitch size and secondarily to road width and shared hard-standing/parking. There is no soft landscaping on any older sites and a designed play area on only one<sup>4</sup> (**check**).

## 2 Suggested densities for new site development

A suitable figure for pitch size that comes up in conversations with Gypsies and Travellers is "at least 50' by 50"<sup>5</sup>. This is equivalent to 230m<sup>2</sup>. Both Fluid consultants (see below) and CBRE<sup>6</sup> [NLP 2007: para 2.16] take a figure of 225m<sup>2</sup>. Two recent site designs for London have been based on pitch sizes of 240m<sup>2</sup> and 250 m<sup>2</sup>. Gypsies and Travellers argue that the more nearly square that a pitch is, the better in terms of access, flexibility and a feeling of openness<sup>7</sup>.

But a site needs to include roads and shared areas as well as pitches. The table below is based on the suggestions for a hypothetical 10 pitch site by Fluid Consultants [2006: p35]:

Site components	Upper end	Lower end
Pitches	225m <sup>2</sup> x 10 = 2,250m <sup>2</sup>	225m <sup>2</sup> x 10 = 2,250m <sup>2</sup>
Site roads	1,000m <sup>2</sup>	950m <sup>2</sup>
Off-pitch parking	550m <sup>2</sup>	-
Shared space	1,100m <sup>2</sup>	350m <sup>2</sup>
Site area	4,800m <sup>2</sup>	3,550m <sup>2</sup>
Net density (pitches/ha)	<b>21 ppha</b>	<b>28 ppha</b>
Site : pitch ratio	2.1:1	1.6:1

bptw, the architects who designed Lewisham's Church Grove scheme, "advise that, on a regularly shaped site with no constraints the minimum site area to accommodate five pitches is around 2,145m<sup>2</sup>" [NLP 2007: para 2.18]. This translates into a net density of **23.3 ppha** (site : pitch = 1.7:1).

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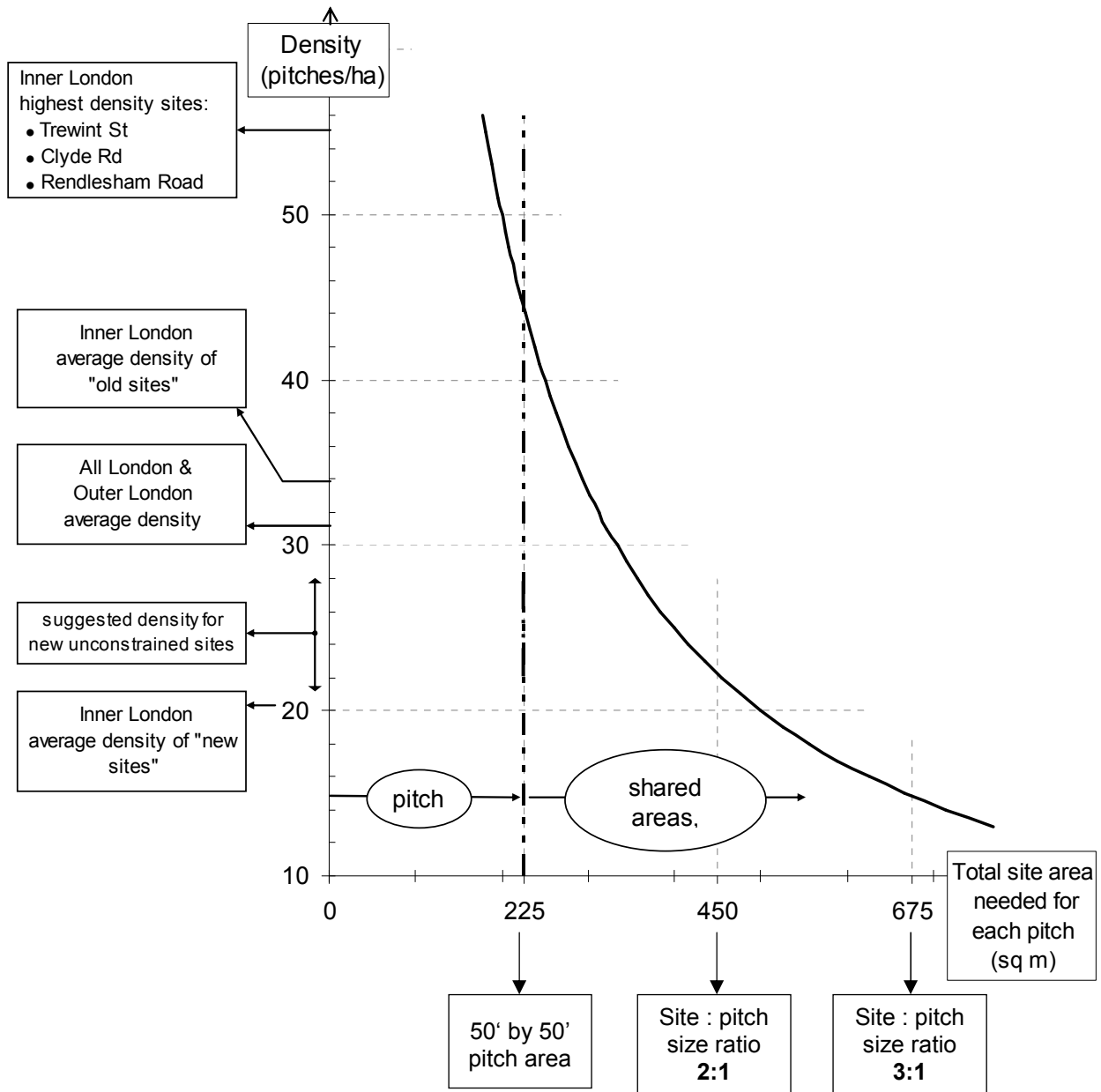
<sup>4</sup> Brent's Lynton Close.

<sup>5</sup> LGTU consultation and advice work

<sup>6</sup> CB Richard Ellis – property consultants

<sup>7</sup> LGTU consultation and advice work

### 3 Ready reckoner: density, site area and pitch area

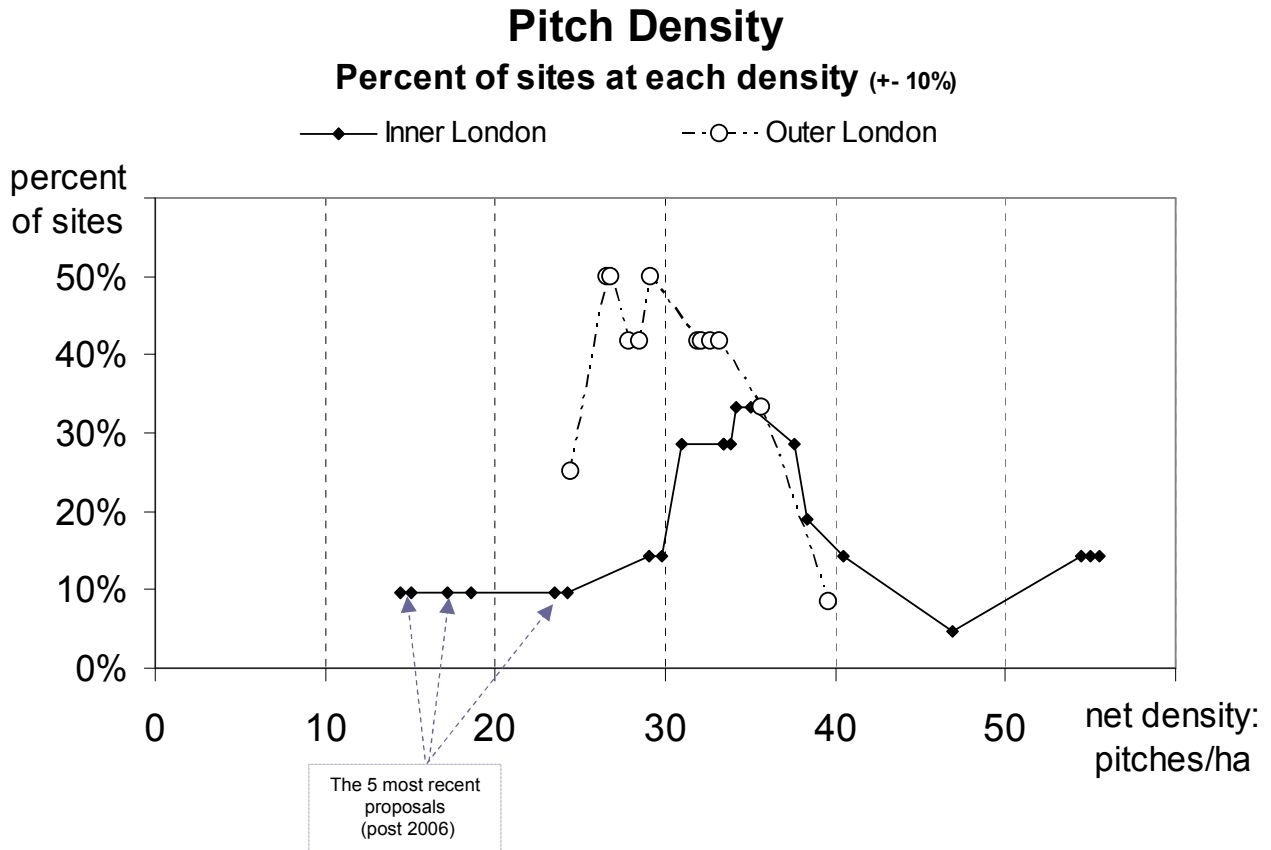


This diagram illustrates the mathematical relationship between pitch size, shared areas (ancillary uses) and density. With a pitch size of 225m<sup>2</sup> the suggested densities for new development allow some 125-225m<sup>2</sup> per pitch for ancillary and shared use.

Pitch size would have to be reduced noticeably with net densities above 30ppha. The most densely occupied sites must have pitches of something like 120m<sup>2</sup> (check) and/or be 'street properties' requiring no on-site roads.

## 4 Pitch density of London's existing sites

The graph<sup>8</sup> below shows that densities for existing Outer London sites fall between about 25 and 40 pitches/ha and that most of them are clustered in the range 27-33 pitches/ha. The only significant outlier is Richmond's Bishopsgrove site that comes out at 40 pitches/ha. This appears to have small pitches (c160m<sup>2</sup>) and a very tight road layout.



In Inner London there is some concentration in the 30-35 pitches/ha range. But more notable is the comparatively even spread over a wide range.

At the low end there is an easily identifiable group of the 5 post 2007 sites; the first to be built in 10 years. These comprise

- 4 recent sites replacing those lost to the Olympics  
These are all small sites, financed by the LDA, and built to high standards of pitch size and site layout
- recent proposal for Lewisham's Church Grove (which is not progressing)  
A replacement site for one lost to regeneration, again built to a high standard.

Added to these is

- Greenwich's Thistlebrook Manor Way which appears to have large pitches and wide roads, although it has no soft or hard shared space. The density does not appear to be influenced by its having 40 pitches; the highest in London.

<sup>8</sup> I don't know if this way of presenting data has any statistical significance. It appears to get across the gist of the situation. This same data is shown in a more common form of graph in Annex A.

At the other end of the spectrum are four that have small pitches, tight road patterns and no designated shared space. Of these, Lewisham’s Thurston Road (closed) and Haringey’s Clyde Road are ‘street-side’ sites and so have little on-site roadway.

## 5 Influences on pitch density in existing sites

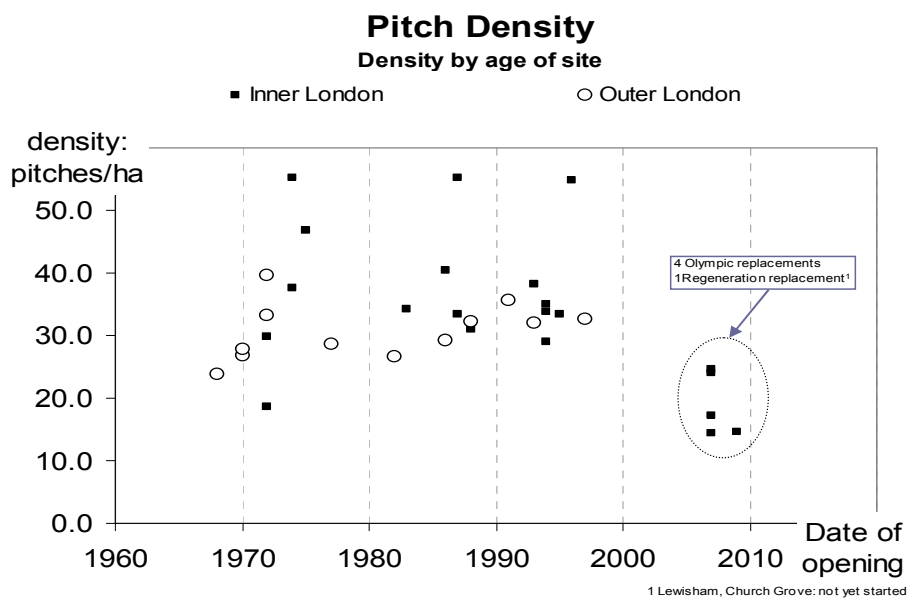
**Caravan capacity:** The government’s biennial caravan count reports both the ‘caravan capacity’ and pitch numbers for each public/RSL site. This report has used the statistics for pitch numbers in order to calculate density. But it might be that the caravan capacity gives a statistical insight into variations in density: it would make sense, for example, if sites with lower pitch densities had a proportionately higher caravan capacity. But there is no (inverse) relationship between density and proportionate caravan capacity. The random nature of these results implies strongly that a proportion of the data returns is arbitrary.

**Size of pitches:** Niner [2003] found that, of her sample across England, “The median area of pitches surveyed is 195m<sup>2</sup>, with around a quarter of pitches having an area less than 130m<sup>2</sup>.” In recent planning application in London, we have found pitches of 240m<sup>2</sup> and 260 m<sup>2</sup> (and low densities). While it is difficult to identify individual pitch boundaries from aerial photos, what can be discerned is consistent with this wide range in pitch sizes and a strong inverse correlation with net density.

**Roads:** Most sites appeared to comprise only pitches and road space. The aerial photos showed noticeable differences in road width (including pavements and on-street parking). This is clearly the second most important determinant of density after pitch size.

**Play space and landscaping:** This is identifiable on only one site (Brent’s Lynton Close) where it makes up something like 5% of the total pitch area.

**Age of site:** The graph below shows little correlation between density and age of site except for the grouping of 5 recent sites with low densities. It appears that there has been a step change in design densities over recent years.



## 6 Data on existing sites

### Sample

The sample contains 33 public sites:

- 29 currently open
- 3 closed (Hackney, Waterden Crescent; Newham, Clays Lane; Lewisham, Thurston Road)
- 1 proposed (Lewisham, Church Grove – assumed to open in 2009 for this study)

4 of the public sites in London are excluded:

- Camden site for single pitch is too out of the ordinary.
- Camden Camden St can't see the site boundary.
- Hillingdon Colne Park doughnut shape of site makes density too difficult to measure.
- K+C Westway can't see shape of site since it is under a flyover.

No private sites are included since pitch numbers on each site are not monitored. (this raises an interesting question of their contribution to targets)

### Data collection and accuracy

The addresses, numbers of pitches and dates of opening of all sites<sup>9</sup> were drawn from the biennial caravan count. The site areas were measured, manually and with school geometry, from aerial photographs from the web, backed up in a very few cases by information in planning applications.

The inaccuracies in this data will spring primarily from

- Misreporting of pitch numbers in the caravan count, and
- Mis-measurement of the site areas due to mis-scaling or site border mis-identification. Cross checks appear to indicate that the results are better than  $\pm 5\%$ .

### Defining the site area

This paper uses the measure of net density which is generally used for bricks and mortar dwellings. Government guidance [DCLG. 2006a: Annex B] on planning for housing states

“Net dwelling density is calculated by including only those site areas which will be developed for housing and directly associated uses, including access roads within the site, private garden space, car parking areas, incidental open space and landscaping and children’s play areas, where these are provided.”

In nearly all cases this is easy to identify. There is often clearly a wall or fence around a site which forms the boundary enclosing the areas described here. In a few cases there is a strip outside this boundary which might be considered “directly associated use” or “incidental open space”. These strips have not been included in the calculation of site area. If they were to be, the areas of the following sites might need to be increased:

Barking and Dagenham, Eastbrookend	by 140%
Redbridge, Northview	by 100%
Croydon, Lathams way	by 70%
Richmond, Bishops Grove	by 30%

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<sup>9</sup> Except Lewisham, Church Grove which was taken from the architect’s plans and assumed to open in 2009



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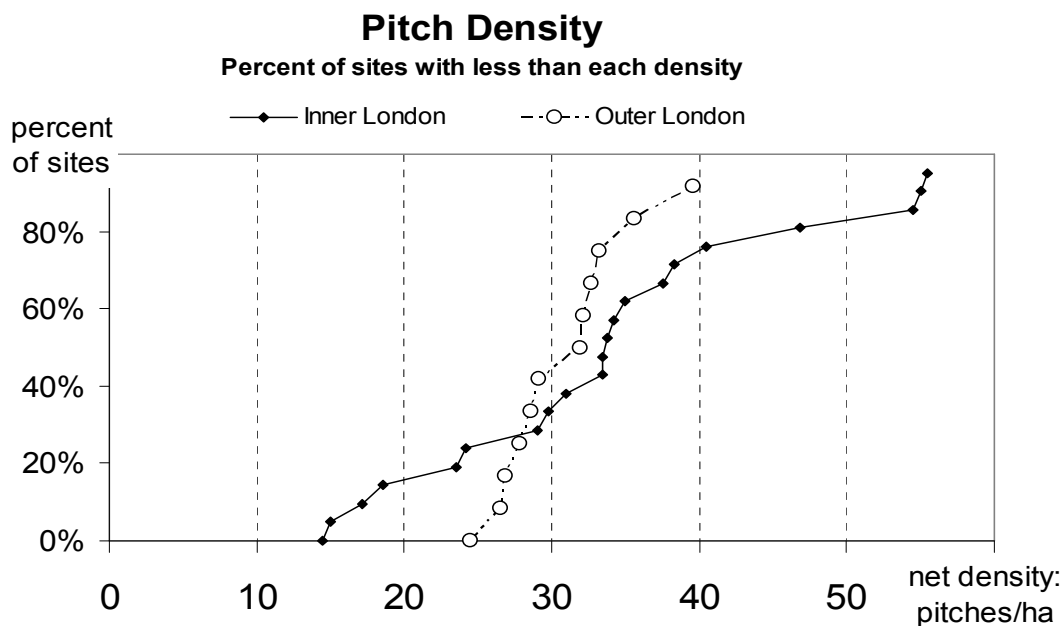
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## Annex A another Graph

This graph provides a more usual way of displaying the data on the range of site densities.



## Annex B Base data

Borough	Site name	N° of pitches	net area of site (ha)	date of opening
<b>Outer London</b>				
Bexley	Powerscroft Road	11	0.39	1977
Brent	Lynton Close	31	0.95	1997
Bromley	Star Lane	22	0.83	1982
Bromley	Old Maidstone Road	15	0.42	1991
Croydon	Lathams Way	15	0.47	1988
Ealing	Bashley Road	24	0.82	1986
Hounslow	The Hartlands	20	0.75	1970
Kingston	Swallow Park	15	0.54	1970
Merton	Brickfield Rd	15	0.45	1972
Redbridge	Northview	16	0.63	1968
Richmond	Bishopsgrove	15	0.38	1972
Sutton	Pastures	15	0.47	1993
<b>Inner London</b>				
Barking & D	Eastbrookend	11	0.29	1974
Greenwich	Thistlebrook Manor Way	40	2.16	1972
Hackney	Wallis Road	5	0.35	2007
Hackney	Ruby Close	8	0.47	2007
Hackney	St Theresa's Close	7	0.29	2007
Hackney	Waterden Cres ( <b>closed</b> )	20	0.52	1993
Hackney	Rendlesham Road	7	0.13	1996
Haringey	Wallman Place	6	0.18	1987
Haringey	Clyde Road	4	0.07	1987
Lambeth	Lonesome Depot	15	0.50	1972
Lewisham	Church Grove ( <b>plan</b> )	5	0.34	2009
Lewisham	Thurston Road ( <b>closed</b> )	12	0.26	1975
Newham	Parkway Cres	15	0.61	2007
Newham	Clays Lane ( <b>closed</b> )	13	0.42	1988
Southwark	Brideale Close	16	0.55	1994
Southwark	Burnhill Close	6	0.18	1994
Southwark	SpringtideClose	5	0.14	1994
Southwark	Ilderton Road	15	0.37	1986
Tower Hamlets	Eleanor St	19	0.56	1983
Waltham Forest	Peacock Close	17	0.51	1995
Wandsworth	Trewint St	12	0.22	1974