

Strategic Local Plan Background Note

Residential Density

October 2014



St Albans
City & District Council



Background Note

Residential Density

An earlier version of this note was considered by the Council's Planning Policy Committee on 3 July 2014. This version provides additional examples. The purpose of this Note is to illustrate housing density on some well known sites across St Albans City and District and thus to give a range of comparators for typical residential layouts / designs.

Measuring housing density is a simple way of quantifying the intensity of residential development and efficiency in use of land for housing. The measurement also gives some insight into the environmental character of housing areas.

The Note gives local examples of:

Relationship between gross and net density in recent major residential development

1. Jersey Farm; 1980's
2. Hill End / Cell Barnes; 1990s
3. Napsbury; 1990 / 2000s

Net density calculations

1. New England Street area, St Albans
2. King Harry Lane (new development in progress), St Albans
3. Jersey Farm Estate, St Albans
4. Oaklands Smallford Campus (current housing application as proposed), St Albans
5. Former Oaklands College City Campus housing redevelopment, St Albans
6. Part of Marshalswick Estate, St Albans
7. Part of Chiswell Green
8. Luton Road area, Harpenden
9. Belmont Hill, St Albans
10. Elm Lawns Close, St Albans
11. Land Rear of Sandridge Road, St Albans
12. Waverley Road, St Albans
13. St Albans Hospital site
14. Station Road, Harpenden (a)
15. Station Road, Harpenden (b)
16. Redbourn Lane, Harpenden
17. Luton Road, Harpenden

Calculation and interpretation of residential density

Decisions on what housing density is appropriate for a location are influenced by many different factors.

Building height, block size and housing typology are the main factors that influence the character of an area and perceptions of density.

However, higher density does not have to mean tall buildings with small apartments that fail to relate to local character. In fact, high buildings can be less effective in maximising the use of land, especially in terms of the relationship of developed and open areas.

Good design is crucial to achieve environmental quality. Each design scheme should establish the density appropriate for a particular location taking into consideration factors such as:

- Context - density appropriate to context and allowing respect for surrounding residential character
- Quality of public realm - a legible and stimulating public realm
- Outdoor space - high quality communal space
- Private and public space mix - ability to manage spaces
- Parking - adequate and appropriate car parking levels which do not dominate or detract from the external environment

Additional factors which might determine an appropriate density level include:

- Surrounding built form
- Housing types
- Need for different types of housing
- Need to create variety of densities – density mix
- Capacity of facilities for residents

It is important to remember that density is a product of design, not a determinant of it. Residential density should aim to support local infrastructure such as shops, schools, and local transport. Homes and Community Agency (HCA) “research has shown that there is no correlation between urban quality and density. Developments driven by average densities and shaped by blanket standards (relating to privacy, open space, parking and highway geometry, for example) stultify design and tend to produce lowest-common-denominator blandness.”

In the St Albans City and District Strategic Local Plan (SLP) the factors of what ‘housing types’ and the ‘need for different types of housing’ are particularly important. The draft SLP says: “All new housing development will contribute to a mix of different housing types in residential areas, taking into account the existing pattern of housing in the area, evidence of local need and site specific factors. It will in particular require the inclusion of more small and small to medium-sized housing, including one and two bedroom flats and 2

bedroom houses, in new development schemes in suitable locations, to increase the proportion of such sized units in the district housing stock, to widen choice and to provide more relatively low cost market housing available to buy. Floorspace, as well as room numbers and bedroom numbers, will be considered in judgments of relatively low cost market housing.

The Council requires the affordable housing size, type, and mix to broadly reflect that being provided for the market element of all development.

The Council seeks the provision of a reasonable proportion of housing designed to the lifetime homes standard that can be readily adapted to meet the needs of older people and people with disabilities.

Sheltered housing and extra care housing for older people and those with special needs will be encouraged on suitable sites in areas close to a range of services.

Further detail on requirements for appropriate housing size, type, mix and proportion of lifetime homes will be given in the DLP. “

Measuring density

There are different ways of measuring density, each of which provides different information.

They include:

- Dwellings per hectare (DPH) – this a common measure to indicate residential density. However, apartments at 60dph may actually have smaller built volume than larger houses at 30dph with related garaging.
- Square meters per hectare – measuring amount of floorspace per hectare is another method to illustrate development intensity. It indicates more clearly how efficiently land is being used.
- Floor area ratio (FAR) or plot ratio – this measurement express the ratio between gross floor area and site area. It again indicates the intensity of land use and gives some indication of massing volumes.
- Bedspace per hectare – measuring bedspace per hectare indicates population capacity rather than actual use (as some dwellings may be under-occupied.)
- Habitable rooms per hectare – habitable room and bedspace densities give an indication of resident population and a calculation of population capacity. Calculating habitable rooms per hectare can be helpful in

determination of likely demand for amenities and services such as public transport.

For the purpose of this Note the simple dwellings per hectare has been adopted.

The first part of the Note illustrates how density is viewed at a gross level. It gives examples of the relationship between gross and net density calculations. Gross density calculations can be used to estimate and illustrate the potential development capacity of a site. The Green Belt Review Part 2 (SKM Enviro Consultancy Study) used the approach that up to 60% of the Gross Development Area (GDA) would be developed (termed Net Development Area) and the remaining 40% would be required to provide infrastructure, main roads, open space and public facilities.

The second part of the Note illustrates calculations of net density. A net density measurement includes access roads within the site, private garden spaces, car parking areas, incidental open space and landscape and children's play areas but normally excludes major distributor road, primary schools, open spaces serving a wider area and significant landscape buffer strips.

Net density is the measure of density used for the SKM recommended net development areas and thus is a comparable measure to that used in the illustrations in this Note.

Work on density assumptions in the draft Strategic Local Plan (SLP) is based on HCA research, in the form of a density matrix (Table 3.3 from the Homes and Communities Agency Urban Design Compendium – reference below). The matrix links typical residential densities to urban form ('creating urban structure'). It draws on examples of development across the UK and Europe. Average densities are based on case studies analysed as part of the *Sustainable Residential Quality: Exploring the housing potential of large sites* research. The matrix recommends that residential densities of 30 to 50 DPH (alongside related services) should be applied in suburban locations. This is considered to be relevant to the SKM identified sub areas assessed for the draft SLP, as they are located on the edges of existing settlements and exhibit suburban characteristics.

Illustrative areas analysed for the purpose of this study can be considered in the context of the Density Matrix.

The matrix is reproduced below:

		Option 1	Option 2	Option 3
Car Parking Provision		High 2-1.5 spaces per unit	Moderate 1.5-1 space per unit	Low less than 1 space per unit
Redominant Housing Type		Detached & linked houses	Terraced houses & flats	Mostly flats
Location	Setting			
Site within Town Centre 'Ped-Shed'	6 ↑ Accessibility Index ↓ 4	Central		240-1100 hr / ha 240-435 u / ha Ave. 2.7 hr / u
	Urban		200-450 hr / ha 55-175 u / ha Ave. 3.1 hr / u	450-700 hr / ha 165-275 u / ha Ave. 2.7 hr / u
	Suburban		240-250 hr / ha 35-60 u / ha Ave. 4.2 hr / u	250-350 hr / ha 80-120 u / ha Ave. 3.0 hr / u
Sites along Transport Corridors & Sites close to a Town Centre 'Ped-Shed'	3 ↑ ↓ 2	Urban		200-300 hr / ha 50-110 u / ha Ave. 3.7 hr / u
	Suburban	150-200 hr / ha 30-50 u / ha Ave. 4.6 hr / u	200-250 hr / ha 50-80 u / ha Ave. 3.8 hr / u	
Currently Remote Sites	2 ↑ ↓ 1	Suburban	150-200 hr / ha 30-65 u / ha Ave. 4.4 hr / u	

Table 3.3 Density matrix

Average densities are based on case studies analysed as part of the *Sustainable Residential Quality: Exploring the housing potential of large sites* research (LPAC, DETR, GOL, LT and HC, 2000)

(Note: This table is a direct extract from Homes and Community Agency Urban Design Compendium 1. Second row in column one should read 'predominant'.)

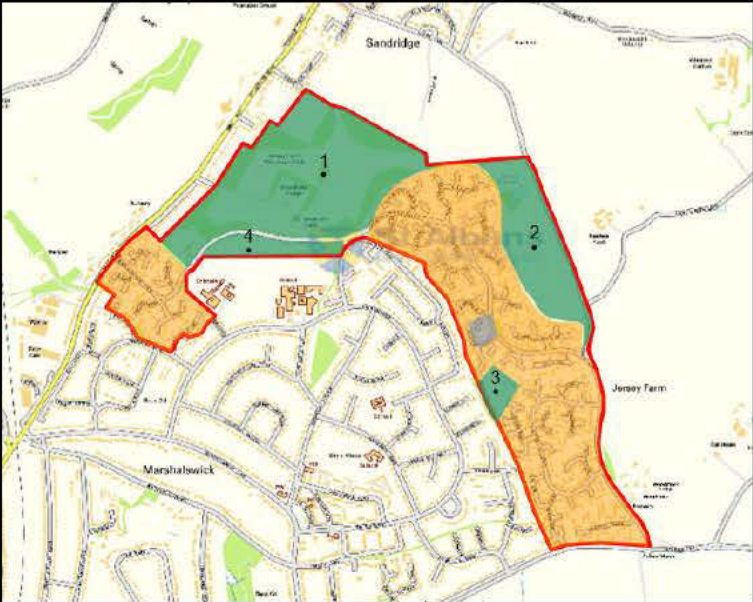
Reference:

Urban Design Compendium 2 (2007), *Delivering Quality Places* (2nd Ed), Homes and Community Agency

Relationship between gross and net density in recent major residential development – local examples

All figures are estimated / rounded (details noted below)

1. Jersey Farm 1980s

JERSEY FARM	Total area of development (Ha)	Area used for infrastructure (Ha) (mainly large open spaces, distributor roads and school sites)	Remaining area for residential development (Ha)	Dwelling numbers	Notes on assumptions / estimates
	102 ha	44 (43%)	58 (57%)	1800	<ul style="list-style-type: none"> • Infrastructure taken as including schools (see below), local centre (1 Ha) woodland park / schools (32 ha) eastern OS (9.5 Ha) local centre OS (1.5 ha) • Above area used for infrastructure includes approximately 25% of Wheatfields and Sandringham school sites to reflect use and expansion for the Jersey Farm estate (albeit this site



- Site boundary
 - Developed area
 - Undeveloped area
 - Local Centre
1. Woodland Park OS
 2. Eastern OS
 3. Central OS
 4. Part of school site OS

Density calculations -
 dwellings per Ha (dph)

Gross

1800
 dwellings on

Net

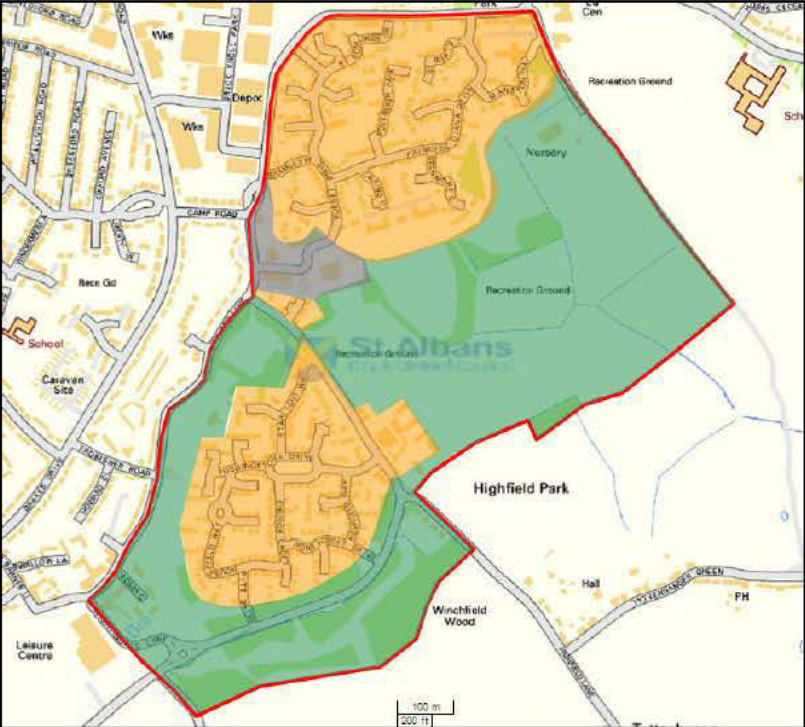
1800
 dwellings on

is pre existing and also serves Marshalswick)

- Area used for infrastructure is probably an underestimate as, for ease of calculation, parts of the distributor road corridor and Jersey Lane are not included because they would require micro level area measurement
- Dwelling numbers are estimated as Census super output lower level areas (SOAs 007C, 007B, 008A) and address point area adjustment. SOAs do not co-incide exactly with the estate to the NW corner. A cautious adjustment has been used

	102 Ha = 18 DPH		58 ha = 31 DPH		
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2. Hill End / Cell Barnes 1990s

HILL END / CELL BARNES (HIGHFIELD)	Total area of development (Ha)	Area used for infrastructure (Ha) (mainly large open spaces, distributor roads and school sites)	Remaining area for residential development (Ha)	Dwelling numbers	Notes on assumptions / estimates
	78 ha	46 ha 59 (%)	32 ha 41 (%)	800	<ul style="list-style-type: none"> • Infrastructure taken as including local centre (1.8 Ha), Highfield Park recreation areas (26 Ha) and Winchfield Wood OS (13.4 Ha). Full map of the Highfield Park facilities can be found here. The remainder is general open space and community facilities. • Dwelling numbers are estimated from Census super output lower level areas (SAOs) 015A and 015B and address point data



- Site boundary
- Developed Area
- Undeveloped Area
- Local Centre


Density calculations - dwellings per Ha (dph)

Gross
800 dwellings on 78 Ha = **10 DPH**

Net
800 dwellings on 32 ha = **25 DPH**

adjustment. SAO 15B covers Tyttenhanger Village and parts of Colney Heath Lane schools.

3. Napsbury 1990 / 2000s

NAPSBURY	Total area of development (Ha)	Area used for infrastructure (Ha) (mainly large open spaces, distributor roads and school sites)	Remaining area for residential development (Ha)	Dwelling numbers	Notes on assumptions / estimates
	60 ha	37 ha 62 (%)	23 ha 38 (%)	620	<ul style="list-style-type: none"> • Infrastructure taken as all large blocks of open space forming the setting for the residential development (37 Ha in all). These include distributor road and some small scale recreation facilities. • Area residentially developed is quite low and includes considerable additional integral amenity open space. This is due to the special character of this historic psychiatric hospital site; recognised in its conservation area designation. The



Site boundary
 Developed area
 Undeveloped Area






design context set was in the importance of maintaining the extensive parkland setting



Density calculations - dwellings per Ha (dph)






Gross
620 dwellings on 60 Ha = **10 DPH**

Net
620 dwellings on 23 ha = **27 DPH**

Net density calculations – local examples

1. New England Street area, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land enclosed by New England Street to the West, Verulam Road to the North and College Street to the South, St Albans</p> <p>This is a residential area with primarily 2 storey cottage terraced houses built in the 19th Century. Additional residential development took place at the beginning of 20th Century along Verulam Road.</p> <p>The site includes two commercial units and a social use with small pockets of open space.</p>	 	 <p data-bbox="1032 488 1294 515">New England Street</p>  <p data-bbox="1032 855 1285 882">Temperance Street</p>  <p data-bbox="1032 1193 1223 1220">College Street</p>	<p>The site is 2.5 ha in area and there are 144 dwellings within the site.</p> <p>Net density of this site is 57 DPH.</p>	<p>Some of the space adjoining New England Street has been included in the calculations to illustrate the density with a reflection of the character of the area including some public space.</p> <p>A major factor in high density is total reliance on-street parking.</p>

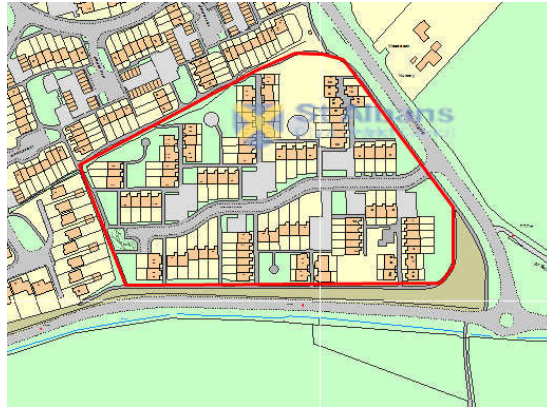
2. King Harry Lane (new development in progress), St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>The development of this site is divided into two phases. Phase one (northern side) is a proposal for 126 dwellings (16 key worker units, 45 extra care/assisted living units and 65 units of accommodation for the over 55s).</p> <p>Outline planning permission for phase one development was granted on appeal in February 2008.</p> <p>Phase two (immediately to the south of phase one development) is a development of 150 dwellings (ranging from 2 – 2.5 storey houses) Permission for this development was granted on appeal in April 2010.</p>	 <p>The top image is a street map showing the site boundary in red, with labels for 'Sch', 'St Albans Recreation Ground', 'CONNUM GATE', 'KING HARRY LANE', 'DURRAL PL', 'WOLLAIT DRIVE', and 'ABBEY AVENUE'. The bottom image is an aerial photograph of the same site, also outlined in red, showing the surrounding residential area and the recreation ground.</p>	 <p>The top image is an 'Illustrative Masterplan for phase one development' showing a layout of buildings and green spaces. The middle image shows a street view of 'Mortimer Crescent (phase two)' with a row of brick houses. The bottom image is another street view of 'Mortimer Crescent (phase two)' showing a different angle of the brick houses.</p>	<p>The site is 7.8 ha in area the total number of proposed dwellings is 276.</p> <p>Based on these figures, net density for the whole site is 35 DPH.</p>	<p>This is illustrative of a recently permitted development in a suburban location but including some open spaces.</p> <p>Each site has different ownership but both sites share access arrangements and a coordinated design led approach.</p>

3. Jersey Farm Estate, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Various parts of Jersey Farm Estate.</p> <p>The development of the whole estate took place across 1970s and 80s.</p> <p><u>Area 1 – North – eastern part of Jersey Farm.</u></p> <p>Permission for development of this site was granted in early the early 1980s.</p>	 	 <p>Lincoln Close</p>  <p>Pirton Close</p>  <p>Sandringham Crescent</p>	<p>Area 1 The site is 6.8 ha in area and there are 156 houses within the site.</p> <p>Net density of this area is 23 DPH.</p>	<p>The site consists of 2 storey detached houses. Average plot size is 300 to 350 m2.</p> <p>All the houses have garages and off street parking.</p>

Area 2 – Southern part of Jersey Farm

This part of Jersey Farm Estate development consists mainly of 2 storey terraced houses.

Permission was granted for the development of 118 Dwellings (60 flats and 58 homes) in the 1970s.



Newgate Close



Newgate Close



Newgate Close

Area 2

The site is 2.8ha wide and there are 88 terraced houses within the site.

Net density for this site is **31 DPH**.

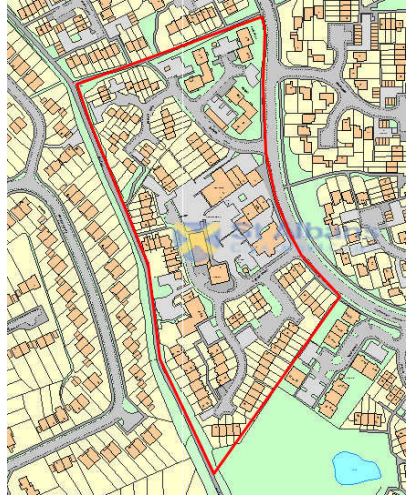
Houses are set back from the street and have relatively large front and back gardens.

There is a significant amount of designated resident parking space and pockets of green open space which explains the relatively low density for a development of terraced housing.

Area 3 – Middle part of Jersey Farm

This is a mixed use area which includes residential dwellings, commercial and community uses

Permission for the commercial Village Centre Development was granted in the late 1970s followed by approval for adjoining residential development in the early 80s.



Harvesters



Twyford Road






Commercial Centre





Area 3






The site in total is 3.5 ha in area. Within the site there are 92 terraced houses, three blocks of flats (equivalent of 42 flats in total) and commercial centre (0.6 ha) which includes neighbourhood supermarket, five small retail units, public toilets, medical and community centre.






After taking away the volume of commercial centre area and its parking, the net density for the site is **46 DPH.**




This relatively high density can be explained by the high proportion of terraced housing and flats. Dwellings of this kind are often included in the design of a central area or local centre within a settlement and this will allow higher overall densities to be achieved. It also introduces variation in the character of the built environment.

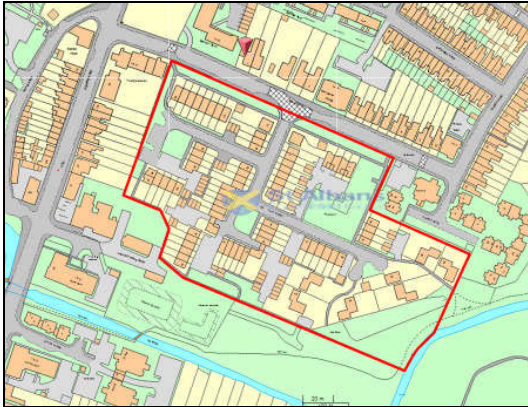




4 Oaklands Smallford Campus (current housing application as proposed), St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>A full application for comprehensive redevelopment to provide new and refurbished College Buildings and residential development of 348 dwellings, car parking, associated access and landscaping was submitted in May 2013. The application is still under consultation.</p> <p>The area marked on the map is the area proposed by the applicant for residential development.</p>		<p>Landscape proposal</p>  <p>Proposed Residential Layout</p> 	<p>The site is 13.68 ha in area. The application proposes development of 348 residential dwellings.</p> <p>Within the design proposal there is a quite significant amount of structural open space in the northern part of the site and middle of the site.</p> <p>The overall density of the site is 26dph but after taking away the area of structural open space the net density for this development is 31 DPH.</p>	<p>The scheme proposes mainly 2 – 3 storey houses.</p> <p>Density of the site varies depending on character zones. Proposed 'Main Streets' will be lower in density in the range of 30dph. 'The lanes' will be medium density (35dph) and 'Mews Links' will be higher density ranging from 40 - 45dph.</p>




5. Former Oaklands College City Campus housing redevelopment, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>This is a former Oaklands College City Campus site.</p> <p>Permission for demolition of educational buildings, change of use from educational use to residential use of eight buildings, retention of two building as hall and gym and erection of 15 apartment blocks providing a total of 329 units was granted on an appeal in August 2006.</p> <p>The density calculation is for part of the development - the section now redeveloped.</p>	 <p>The 'Map and Aerial Photographs' section contains two images. The top image is a site plan map with a red boundary around the development area, showing various colored zones and building footprints. The bottom image is an aerial photograph of the same site, also with a red boundary, showing the existing buildings and surrounding greenery.</p>	<p>Newsom Place</p>   <p>Lemsford Road</p>  <p>The 'Photographs' section contains three images. The top image, labeled 'Newsom Place', shows a modern, multi-story apartment building with a glass facade and a large tree in the foreground. The middle image, labeled 'Lemsford Road', shows a similar apartment building from a different angle, with a street and parked cars visible. The bottom image, also labeled 'Lemsford Road', shows another view of the apartment building, highlighting its architectural details and landscaping.</p>	<p>The site in total is 3.3 ha in area. Within the site boundary there are 20 apartment blocks (equivalent of 281 dwellings), gym and hall.</p> <p>After taking away the area of the hall/gym buildings the net density for this development is 93 DPH.</p>	<p>The scheme proposes mainly 3 – 4 storey apartment blocks.</p> <p>Parking is at reduced level due to proximity to City services and public transport. Some of the parking is underground. This high density development is appropriate to an urban site, but there is space for extensive landscaping.</p>



6. Part of Marshalswick Estate, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land along Sandpit Lane immediately to the north of current Oaklands application. Marshalswick, St Albans.</p>	 	 <p>Barnfield Road</p>  <p>Southfield Way</p>  <p>Ardens Way</p>	<p>The site is 8.4 ha in area and there are 170 dwellings within the site boundary.</p> <p>Net density for this area is 20 DPH.</p>	<p>The area consists of 2 – 2.5 storey detached houses with garages/ off street parking and relatively large back gardens.</p>





7. Part of Chiswell Green	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land enclosed by North Orbital Road to the East and Watford Road to the West, Chiswell Green</p>	 	 <p>Manor Drive</p>  <p>Watford Drive</p>  <p>Forefield</p>	<p>The site is 9.7 ha in area and there are 145 dwellings within the site boundary.</p> <p>Net density for this area is 15 DPH.</p>	<p>The site consists of a mixture of house types from 1 storey bungalows to 2.5 storey detached houses.</p>

8. Luton Road, Harpenden	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land enclosed by Luton Road to the North and Tuffnells Way to the South, Harpenden</p>	 <p>The top image is a map showing the site boundary in red, with a green area to the north. The bottom image is an aerial photograph of the same area, also with the site boundary outlined in red.</p>	 <p>Ridge Avenue</p>  <p>Wells Close</p>  <p>Tuffnells Way</p>	<p>The site is 10.8 ha in area and there are 190 dwellings within the site boundary.</p> <p>Net density for this for this site is 17 DPH.</p>	<p>There is a mixture of house types. From 1 storey bungalows to 2 – 2.5 storey terraced and detached houses.</p> <p>Plot sizes vary from 1100 m2 to 215 m2.</p> <p>Most gardens are substantial and there is generally ample off street parking.</p>

9. Belmont Hill, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>De Tany Court at Belmont Hill, St Albans (former playing fields)</p>	 	 <p>De Tany Ct and related open space (part of former playing field)</p>  <p>De Tany Ct</p>  <p>De Tany Ct</p>	<p>The site is 2.24 ha in total and there are 80 dwellings within the site.</p> <p>Main open spaces are 0.3 ha in total. These are retained parts of the former playing fields and can be regarded as more than amenity open space included in a net area.</p> <p>Density of this site is 35 DPH.</p> <p>If calculated without play area and open space (south east of the site) the density of this site is 41 DPH.</p>	<p>This is a residential area with a mix of 2-3 storey houses and maisonettes built in late 80s.</p> <p>The site includes a substantial play area and riverside open space serving the wider area and small pockets of integral open space.</p>

10. Elm Lawns Close, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Elm Lawns Close, off Avenue Road, St Albans</p>		 <p>Elm Lawns Close</p>  <p>Avenue Road</p>	<p>The site is 0.4 ha in total and there are 24 dwellings within the site.</p> <p>Net density of this site is 60 DPH.</p>	<p>This residential development is a mix of 2- 3 Storey houses</p> <p>This is a small site, but it illustrates higher density development with car parking in a cul de sac layout. It comprises housing in terraced form.</p>

11. Land Rear of Sandridge Road, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Archers Fields; R/O 168 Sandridge Road, St Albans</p>	 <p>The map shows the site boundary in red, with labels for 'ARCHERS FIELDS', 'Sandridge Road', and 'St Albans'. The aerial photograph shows the site from above, with a red outline and a 'St Albans' watermark.</p>	 <p>Sandridge Road</p> <p>Archers Fields</p> <p>Archers Fields</p>	<p>The site is an urban infill of 0.75 ha in total. There are 27 dwellings within the site.</p> <p>Net density of this site is 36 DPH.</p>	<p>The site consists solely of 2 storey houses, with gardens. They are mainly terraced, but including some linked detached and detached. There is no integral / amenity open space. There is a substantial unused road frontage (south side of access road) which results in a lower density figure than the layout would achieve if the site were not urban infill, fitting into an existing urban layout.</p>

12. Waverley Road, St Albans	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Pegasus Place off Waverley Road, St Albans</p>	 	 <p>Pegasus Place</p>  <p>Waverley Road</p>	<p>The site is an urban infill development of 0.74 ha in total. There are 36 dwellings within the site.</p> <p>Net density of this site is 49 DPH.</p>	<p>The site consists entirely of 2-3 storey terraced houses with associated parking and landscaping. The houses have small gardens. There is no integral amenity open space.</p>

13. St Albans Hospital Sites	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Land adjacent St Albans Hospital, Waverley Road, St Albans.</p>		 <p>Goldsmith Way</p>  <p>Newmarket Ct</p>  <p>Waverley Road with entrance to St Albans City Hospital</p>	<p>The overall site is 9.2 ha in total. The main hospital site (shaded in red) is 3.2 ha. There are approximately 290 dwellings within the remaining site (6 Ha).</p> <p>Net density for the overall site is 48 DPH.</p>	<p>The area includes a wide range of dwelling types including some substantial blocks of small flats.</p> <p>The overall site calculation includes some significant areas of open space, the site of a hospice and other hospital related uses.</p> <p>Densities within the overall site vary greatly.</p> <p>Some sub areas where dwellings are predominantly 2 -3 storey houses are considered separately below.</p>

1. Goldsmith Way



Goldsmith Way

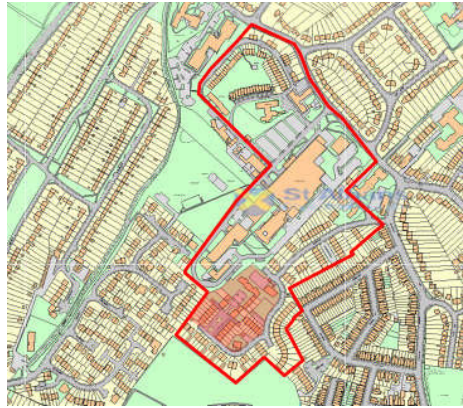


The site shaded in red is 2 ha in total and there are 71 dwellings within selected site.

Net density for this site is **35 DPH**

Dwellings are 2-3 storey houses. Within the site there are pockets of open space and significant amount of on-street and off-street parking.

2. Newmarket Court



Newmarket Court








The site shaded in red is 1.1 ha in total and there are 43 dwellings within selected site.




Net density for this site is **39 DPH**

The site is a mixture of houses and flats with significant amount of on and off street parking space.

14. Station Road, Harpenden (a)	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Mallard Mews / Station Road / Waveney Road, Harpenden</p>	 	 <p>Mallard Mews</p>  <p>Waveney Road</p>  <p>Station Road</p>	<p>The site is 0.25 ha in total and there are 15 dwellings within the site.</p> <p>Density of this site is 60 DPH.</p>	<p>This is an infill development with a mix of 2.5 – 3 storey flats and houses and apartments. This is a part cul de sac part street frontage development.</p>

15. Station Road, Harpenden (b)	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Station Road, Harpenden (flats)</p>		 <p>Station Road</p> <p>Station Road</p> <p>Station Road</p>	<p>The application site is 0.41 ha in total and there are 48 dwellings within the site.</p> <p>Net density of this site is 117 DPH.</p>	<p>This development consists of 2-3 three storey blocks of flats with associated parking spaces to rear of blocks.</p>

16. Redbourn Lane, Harpenden	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>Former Central Science Laboratories, Redbourn Lane, Hatching Green, Harpenden</p>	 	 <p>Manor Close</p>  <p>Manor Close</p>  <p>Hatching Green (road leading to the site)</p>	<p>The overall site is 1.9 ha and there are 39 dwellings within the site.</p> <p>Density of this site is 20 DPH.</p> <p>If calculated without the surrounding open space (approx. 0.63 Ha) then the net density of this development is 32 DPH</p>	<p>This residential development includes 2 storey housing with a mix of terraced, linked detached and detached forms. There is a mix of on-street and off-street parking.</p> <p>There is a substantial setting of open space related to the overall character of the area. This more than integral amenity open space.</p>

17. Luton Road, Harpenden	Map and Aerial Photographs	Photographs	Density Calculations	Notes
<p>40 Luton Road, Harpenden</p>	 	 <p>View from Townsend Road</p>  <p>View from Luton Road</p>  <p>Luton Road</p>	<p>The site is 0.14 ha in total and there are 9 dwellings within the site.</p> <p>Density of this site is 64 DPH.</p>	<p>This residential development consists of 9 apartments in a 3 storey building with accommodation in the roof space and undercroft parking.</p> <p>This is a small infill / redevelopment scheme, but it illustrates how higher density components within an overall area / scheme can contribute to character.</p>