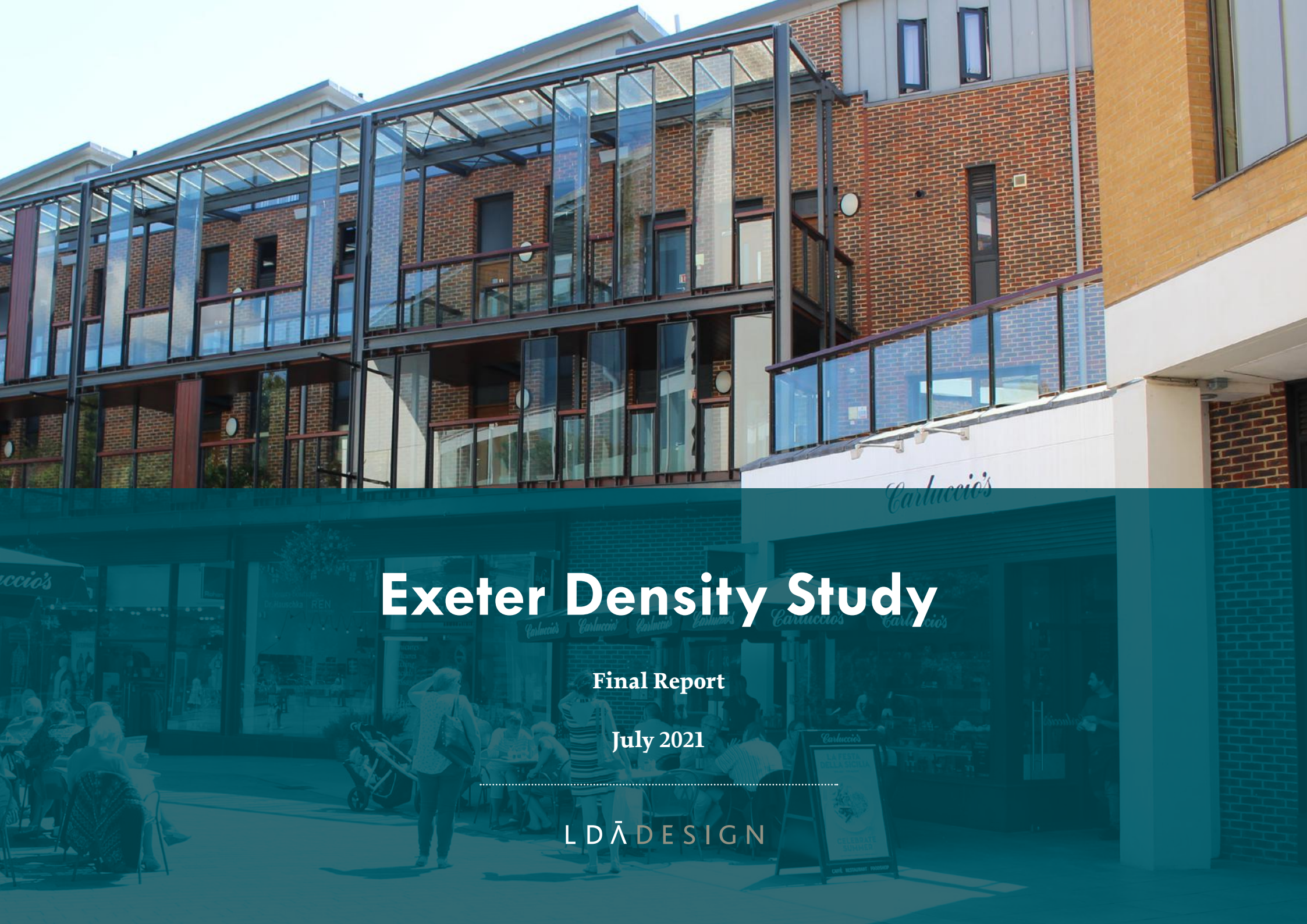

Exeter Density Study

Final Report

July 2021

LDĀDESIGN

Exter quayside

Contents

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Comment Final Report

This document has been prepared and checked in accordance with ISO 9001:2015

1.0 Introduction

1.1 Introduction and purpose

The purpose of the Exeter Density Study is to provide Exeter City Council (ECC) with high- level recommendations for appropriate minimum residential densities within the city centre, as well as identifying other areas of Exeter that are suitable for a general uplift in density in line with paragraph 123 of the NPPF.

There are numerous advantages of building at higher densities in the right locations. These include reducing levels of urban sprawl, encouraging reduced levels of car ownership as residents live closer to public transport hubs, employment and services, and promoting more sustainable lifestyles.

The document identifies key drivers of density at a city-wide level that are in accordance with good growth principles as well as relevant national and local planning policy. Specifically, these are to:

* increase the population density of the city centre;
* optimise density around public transport nodes and strategic cycle routes;
* support the vibrancy and distinctiveness of existing local centres and linked villages; and
* support the city's transition to becoming carbon neutral by 2030.

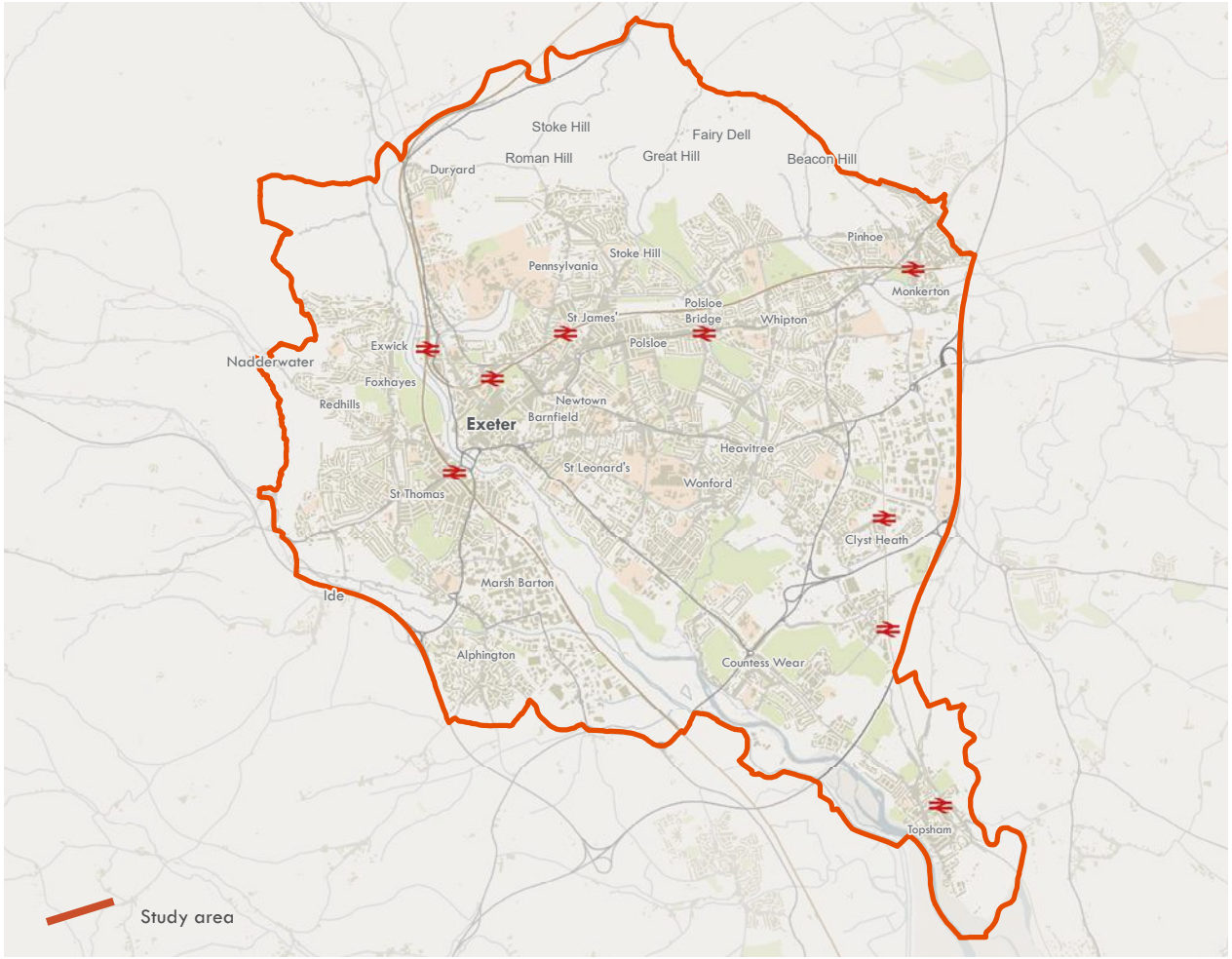


Fig 1: Study area

1.2 Limitations

While broad minimum density recommendations are a useful starting point in establishing potential yields, site densities will need to be driven by design solutions that respond to site specific opportunities and constraints.

Exeter benefits from being relatively compact in form and other parts of the city not identified in this report should still be considered for high density development on a site-by-site basis.

The recommendations in this report are based on a combination of placemaking principles and precedent studies and have not been subject to market testing.

1.3 Planning policy

The National Planning Policy Framework (NPPF)

The NPPF states that a minimum density standard for the city centre and those areas that are well served by public transport should be established. It is noted that in paragraph 123, 'These standards should seek a significant uplift in the average density of residential development within these areas, unless it can be shown that there are strong reasons why this would be inappropriate'.

The NPPF recognises the importance of promoting sustainable transport. Paragraph 102 states that "Transport issues should be considered from the earliest stages of plan-making and development proposals" going on to encourage utilisation of existing infrastructure and promoting walking, cycling and public transport. Patterns of movement, streets, parking and other transport considerations are noted as integral to the design of schemes, and contributing to achieving high quality places.

Paragraph 103 goes on to state that "The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes".

Fig 2:Liveable Exeter neighbourhood graphic

Liveable Exeter

The Liveable Exeter vision is an ambitious blueprint for long term renewal and transformation of its neighbourhoods. It places great emphasis on shaping growth to ensure equitable access to services, green space, jobs and housing to enable the prosperity and health of residents.

In addition to the active design principles established in the document, the eight transformational sites within the document are instructive in showing how an uplift in densities within neighbourhoods can help to generate significant qualitative benefits, including increased investment in high quality streets and public spaces, and creating more opportunities for vibrant mixed-use neighbourhoods throughout the city to reduce car dependency. It shows how a blend of densities can be delivered across larger sites whilst achieving a step change in design quality and place-making.

High density development also means improving affordability and providing better accessibility to housing of all types and tenure, so that for example, people have options to remain within existing neighbourhoods when growing a family, as well as down-sizing in later life.

Fig 3:Liveable Exter photomontages showing place potential

1.4 Definition of Density and capacity

For the purposes of the assessment, target and minimum densities mentioned in this document refer to the Net Site Area (NSA). NSA includes infrastructure and services that are directly associated with the use and enjoyment of the developed dwellings, but excludes a range of other factors as shown in figure 4. It is acknowledged that there are some exceptions where major distributor roads do allow direct plot access. However, these are typically not included in the net site area as they would have a disproportionate effect on density due to the large width of these routes.

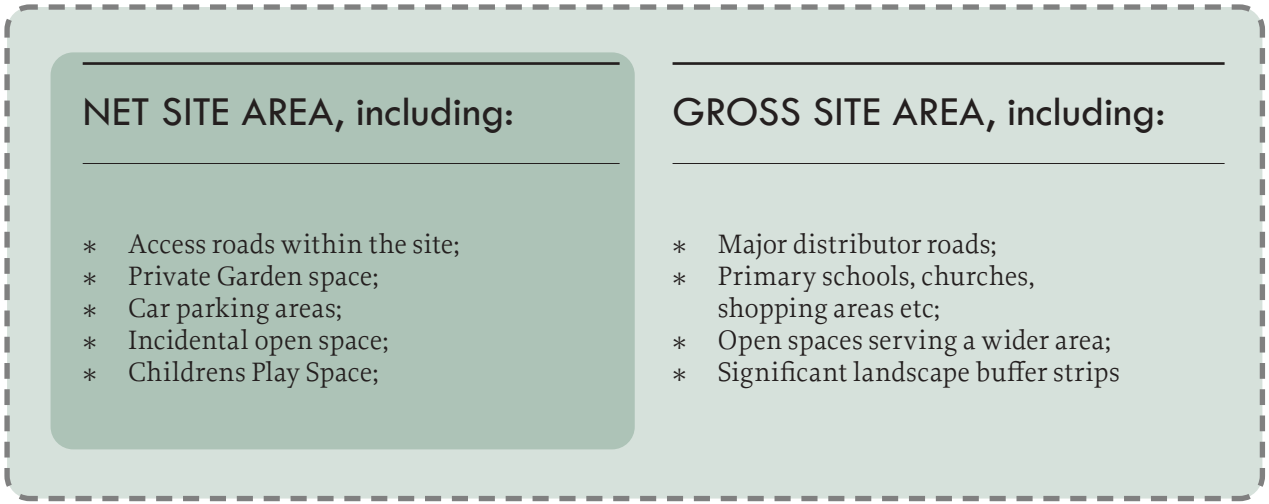


Fig 4: Net Site area

For residential development, the number of Dwellings Per Hectare (dph) is the most widely used metric for assessing density and is considered the most appropriate means of measuring density for this document.

Number of dwellings/Net Site Area(Ha)=Dwellings per Hectare (DPH)

Fig 5: Dwellings per hectare calculation

Liveable Exter photomontage

2. Existing Density Profile

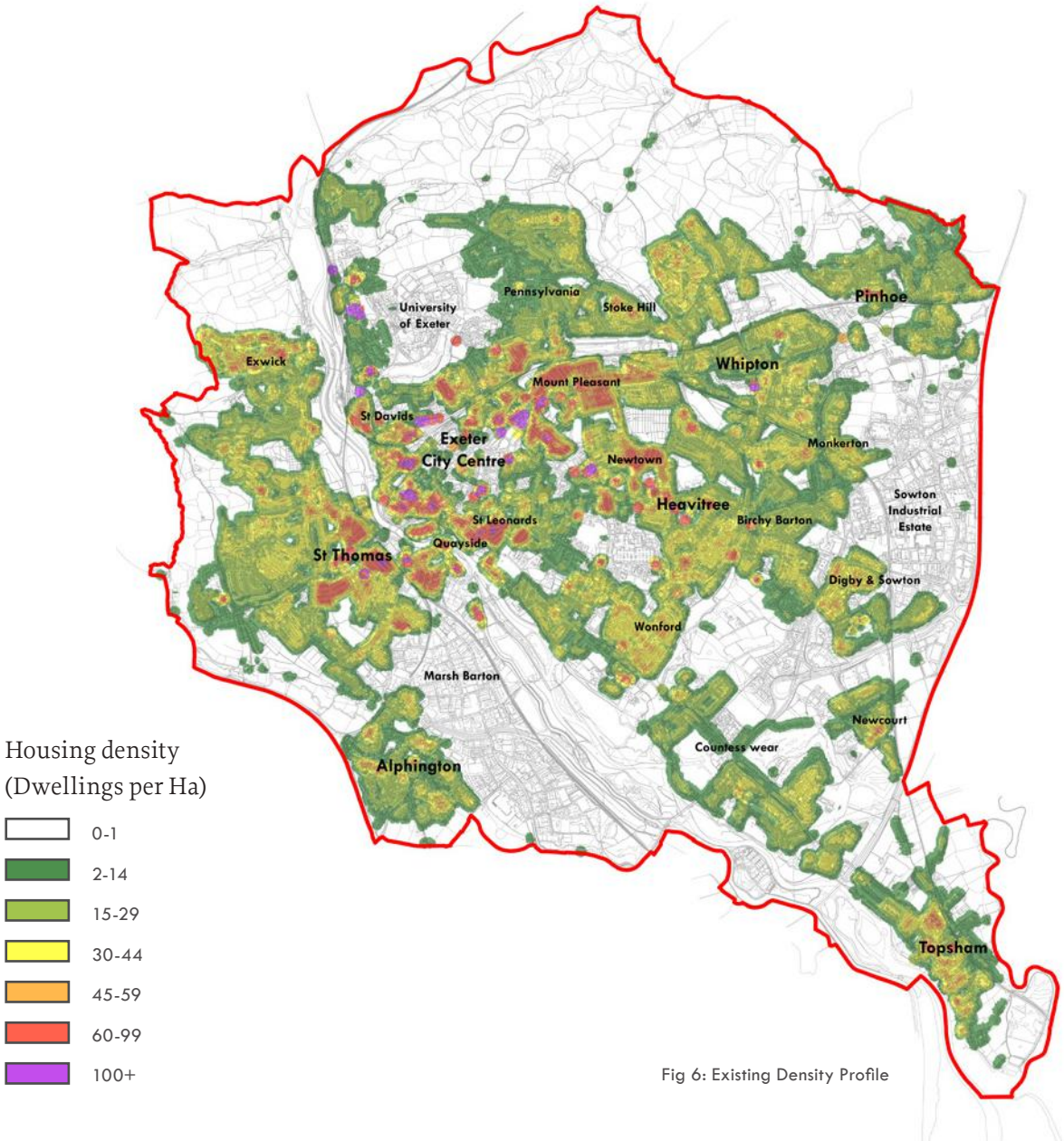


Fig 6: Existing Density Profile

The city of Exeter has undergone many different eras of development which is evident through the study of the city's morphology.

Historically, Exeter expanded radially from the city centre and along key movement corridors, with the surrounding villages gradually incorporated into the built-up area that we see today. The pre-war neighbourhoods circling the city centre housed the majority of Exeter's residential population and were closely associated with the centre and quayside in terms of jobs and daily life.

As the city continued to expand outwards during the interwar period and car usage became commonplace, the prevailing trend of suburban development created a lower density fringe. More recently, new residential neighbourhoods have emerged in the east of the city, based around the new rail stations of Newcourt and Digby & Sowton.

The following pages provide a snapshot of the typical density ranges within Exeter.

City Centre

The building stock within the city centre of Exeter is diverse and historic. The city fabric has been renewed over time, particularly after the city suffered heavy bombardment during WW2, resulting in the loss of many key buildings and clusters. The urban core is generally characterised by mid-rise deep plan buildings of 3-5 storey, and a permeable network of narrow streets that largely respect historic alignments.

The pockets of high-density development shown on the plan relate to recent student development around the edge of the city centre, where low rise shops and business units are gradually being intensified. Residential accommodation is limited in the City Centre, largely due to the high proportion of storerooms/ancillary space above shop units, particularly along the High Street and Sidwell St. Where apartments are utilised above retail units, these tend to be limited to 1 or 2 additional floors and therefore rarely exceed 50 dph.

Smythen St is a rare example of a small scale residential-led development within the city centre, achieving approximately 115 DPH based on a mix of townhouses (27%) and apartments (63%).

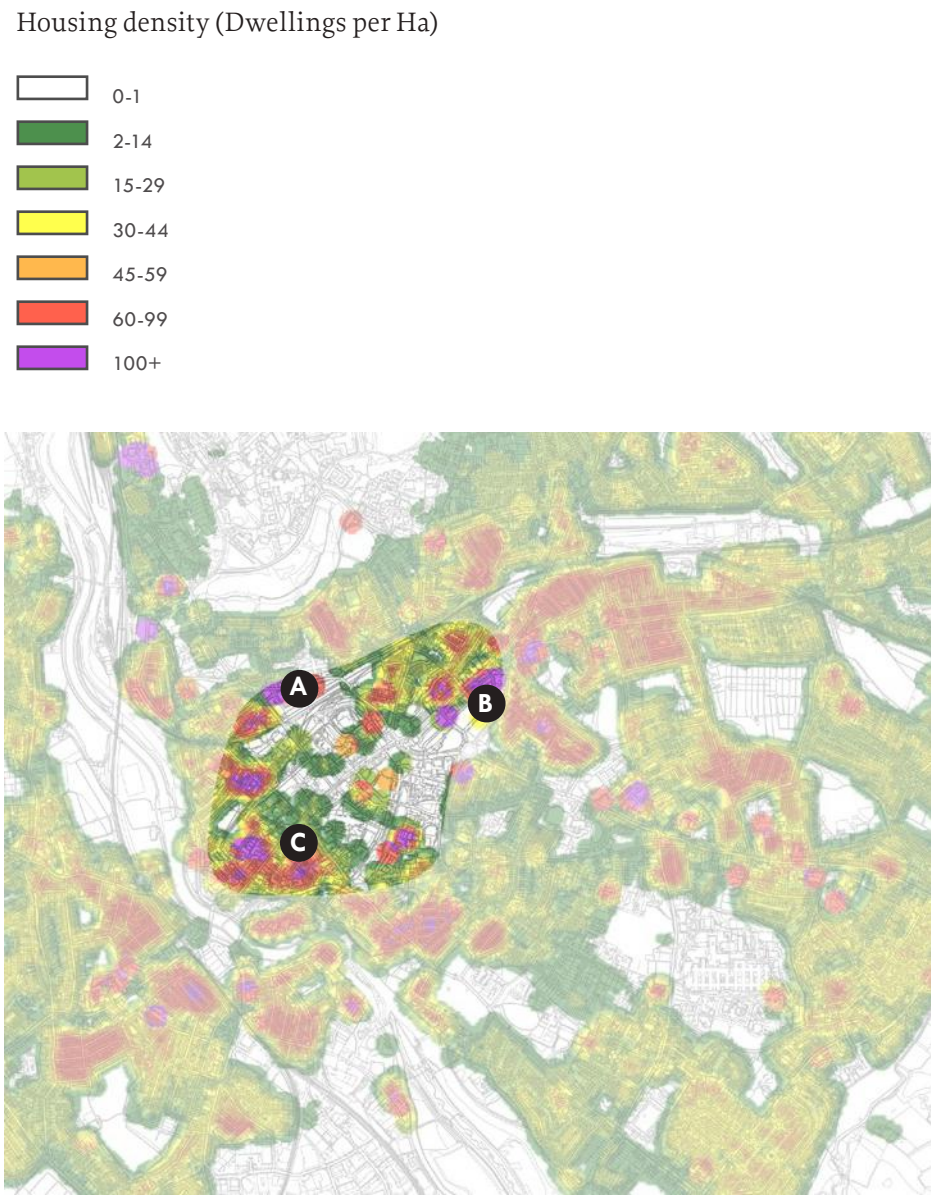


Fig 7: City centre excerpt plan

Studio Apartments
Density: 193 dph
New North Rd

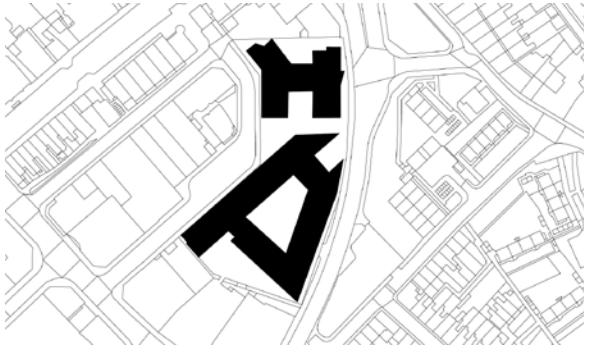
A mixed-use urban development located close to Exeter Central station, consisting of a series of 5/6 storey blocks configured exclusively as studio apartments. Other uses are accommodated at ground level, with decked parking provided at basement level to take advantage of the topography.

A

Purpose built student accommodation blocks
Density: 1000 dph
Western Way

A cluster of 4/5 storey student accommodation blocks adjacent to Western Way on the edge of the City Centre. The lack of on-plot car parking and efficient footprints allow for densities in excess of 1000 dph without resorting to exceptional building heights. Bed spaces are provided in a mix of cluster flats and studios.

B



Urban Residential infill
Density: 115 dph
Smythen St

A residential infill development based on a mix of townhouses and 3 storey and 4 storey corner apartment buildings in an urban context, strongly fronting the street, with small rear gardens and rear parking.

B

Urban

The areas immediately surrounding the city centre comprise most of the highest density residential neighbourhoods in Exeter, as well as encompassing the historic mixed-use Quayside and the village of Heavitree. These areas are typically located within 1.5km of the city centre, making them within easy walking distance (20 minutes), while also enjoying the benefit of smaller local centres and amenities.

These areas are mainly composed of pre-war housing stock. The finest grained streets consist of 2/3 storey Victorian terraces and townhouses, often split into apartments which further increases their density beyond the original densities, with some now achieving up to 90 dph. The less dense areas consist of earlier period detached, semi-detached and grand stuco townhouses, often 2.5/3 storeys and arranged within crescents and attractively proportioned and leafy streets, including the areas of St Davids, Pennsylvania and St Leonards. These vary in density dramatically based on the degree to which they have been subdivided, but densities remain generally under 30 dph.

Due to their relative intactness, historic character and appearance, there is limited scope for intensification in these areas, although some small/ medium scale schemes have achieved densities in excess of 60 dph based on a balanced mix of townhouses and apartments.

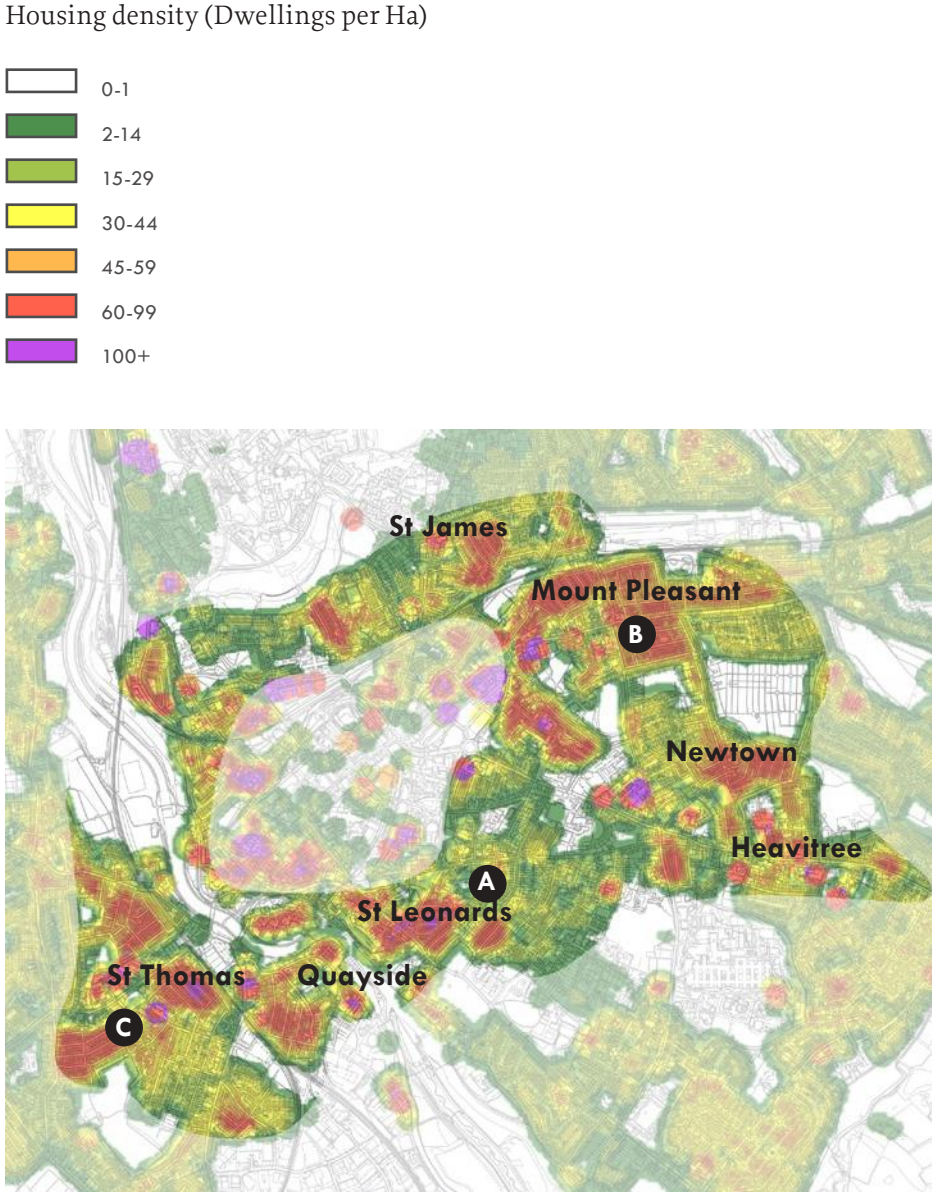


Fig 8: Urban area excerpt plan

Georgian/Victorian
Density: Low/Medium (20-40 DPH)
Neighbourhoods: St Leonards, Powderham Crescent, Polsloe

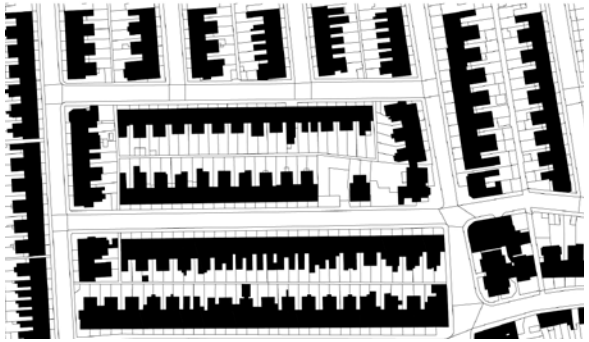
Deep block structures containing a rich mixture of 2.5/3 storey detached, semi-detached and townhouses fronting attractive residential streets. A mixture of on-plot parking and on-street parking. Low rise dwellings nestled within the block structure. Generous front and rear gardens.

A

Victorian terraces
Density: Medium/high (45-90 DPH)
Neighbourhoods: Mount Pleasant, St Thomas, Newtown.

Tight grained networks of streets, with small individual rear gardens and narrow back-to-back distances. These street layouts offer efficient use of land and are popular with residents who want to live within easy access of the city centre. Streets dominated by on-street parking. Often with limited to no defensible front space.

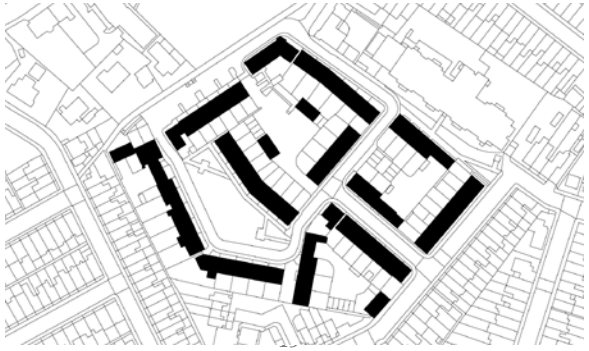
B



Modern infill
Density: 60 DPH
Neighbourhoods: County Ground, St Thomas

An example of a modern residential infill development located close to St Thomas local centre, based on a roughly even split of apartments (44%) and 3 storey townhouses (56%) with a central open space. Although the density at this location is considered appropriate, the design of the scheme has received criticism.

C



Urban Fringe

The urban fringe contains most of the post-war suburbs of Exeter. They are generally located 1.5km away from the city centre and are often positioned on more challenging topographical areas, particularly the neighbourhoods of Exwick to the west and Pennsylvania to the north.

These areas are characterised by long generous gardens and wide plots to accommodate on-plot parking where topography allows. Generally, densities are considerably lower, with a focus on detached and semi-detached typologies. Building heights are generally limited to 2 storeys, although bungalows and split-level housing are also commonly used.

The east has undergone a recent expansion in housing in tandem with the unlocking of new employment areas, with some very small patches of high density within the modern, family orientated developments of Newcourt and Digby & Sowton. However, these spikes mainly relate to discrete apartment blocks and densities rarely exceed 40 DPH on a neighbourhood scale, despite being located close to railway stations.

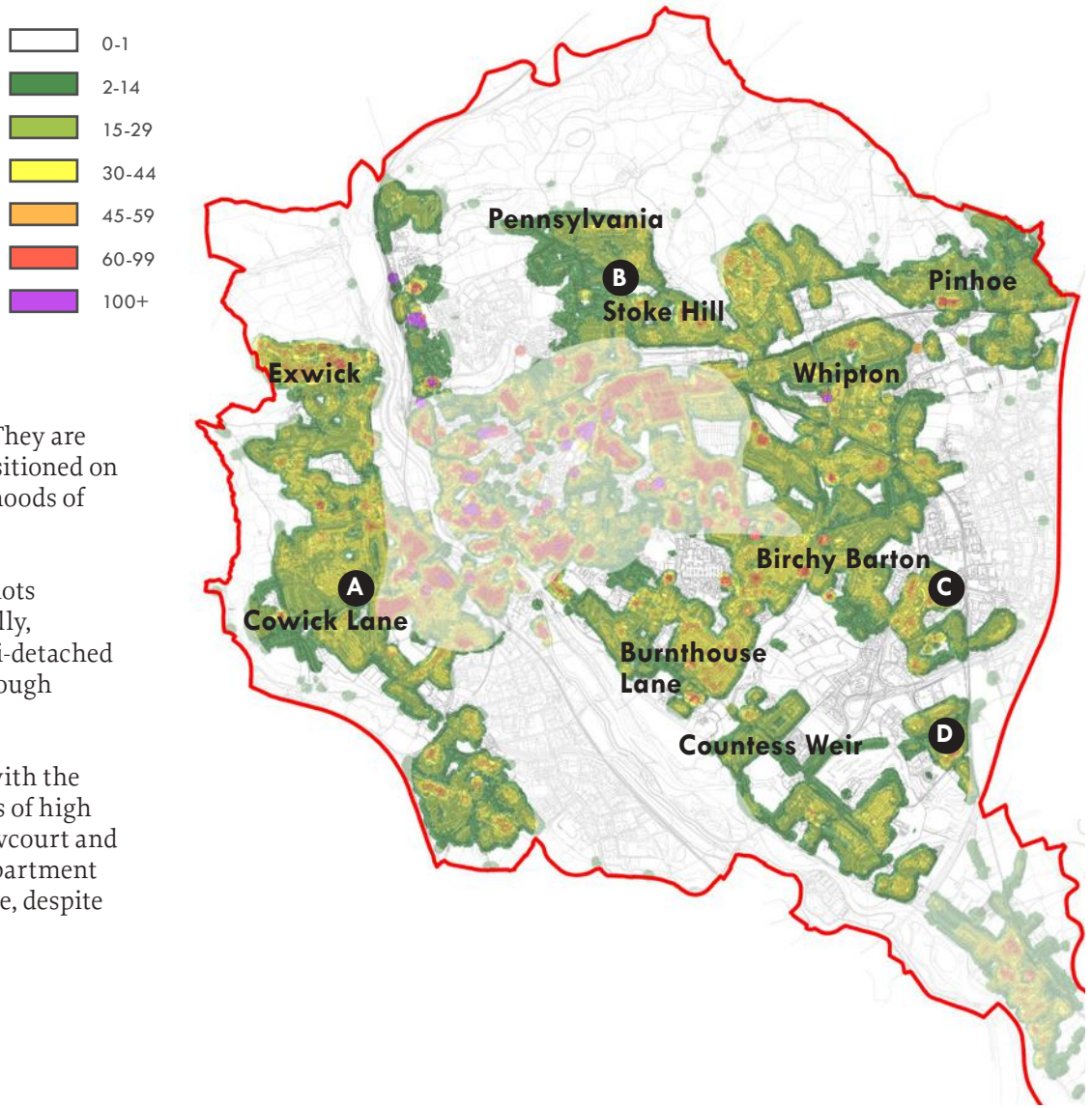


Fig 9: Urban fringe area excerpt plan

Inter war and post war
Density: 20-30 DPH
Neighbourhoods: Burnthouse Lane, Cowick Lane, Birchy Barton

Characterised by large front and rear gardens and wide plots. Predominantly on-plot side parking with garages. Almost exclusively detached and semi-detached typologies with buliding heights of 2 storeys. Consistent streetscape with wide carriageways and limited tree planting. Streets often terminate in cul-de-sacs.

A

Late new town residential- 90's
Density 20-40DPH
Neighbourhoods: Exwick, Stoke Hill, northern Pennsylvania

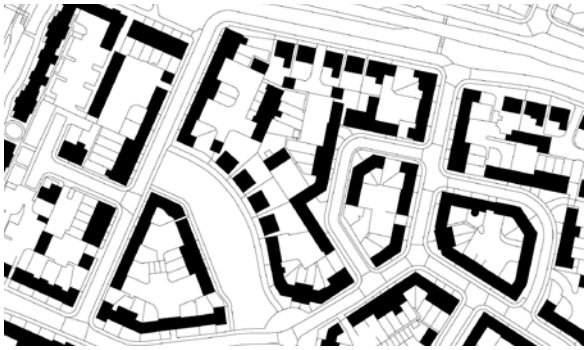
Commonly found on areas of steep terrain. The use of serpentine street forms, often using the Radburn layout of link houses with segregated parking. Short runs of terraces typologies running against contours, with 2 storey detached or semi-detached dwellings along the main streets. Some use of 3 storey apartment sitting within landscape.

B

New Urbanism 2000
Density-30-70 DPH
Neighbourhoods: Digby

'New Urbanism' style continuously fronted urban blocks using standard typologies. Extensive use of rear parking and flats over garages to conceal parking. Small rear gardens as a consequence. Use of 3/4 storey apartment at key junctions with rear parking courts.

C



Post-2000 family housing
Density-15-40 DPH
Neighbourhoods: Newcourt, Bishops Way, Monkerton

Perimeter blocks generally with on-plot side parking. Regular rhythm of closely spaced detached, semi-detached and terraced typologies. Small plots. A mix of 2 to 3 storeys.

D

3. Summary of city densities

An overview of key development densities and neighbourhoods is provided below. Key recently consented and newly built schemes are shown in bold, indicating a market trend towards the use of high densities for a wide range of development sizes. Many recent schemes combine market housing with retirement living to create multigenerational proposals that are often denser than pure open market schemes.

Residential-led densities

	NDA (ha)	Units	DPH	Notes
New North Road	1.3	252	193	100% studio apartments
Vaughan Rd	0.15	21	140	100% apartments
Smythen St	0.3	35	117	63% apartments, 27% houses
Haven Banks	0.8	91	114	80% apartments, 20% houses
A **Erade site**	3.37	276	82	**53% market housing, 25% care home, 22% assisted living**
B **Exmouth Junction (Consented)**	6	465	78	**86% market housing, 14% senior living**
Victorian terraces			45-90	
County Ground, St Thomas	1.7	100	59	
New Urbanism, Digby & Sowton			30-70	
Georgian semi-detached (original)			20-40	
Newcourt, Monkerton			15-40	

Student densities

	NDA (ha)	Units	DPH
BHF, Cheeke St	0.1	97	970
Rougemont Tel Exchange	0.15	132	880
Radmore and Tucker	0.16	98	612.5
Belgrave Rd St	0.65	231	355
Clifton Garage, Bonhay Rd	0.25	62	248

A *17/1640/FUL*

B *19/0650/OUT*

4. Summary of exemplar neighbourhood densities

Key exemplar schemes from across Europe are listed in the table below for reference. These schemes are noted for their high quality, innovative approaches to urban design, architecture and landscaping which have been recognised through numerous industry awards.

It is worth noting the different approaches to achieving densities between 50 and 160 dph whilst still achieving high quality design, from the expansive apartment-led schemes of Hammarby and Invicta, through to tight- knit housing centric neighbourhoods such as Newhall.

Residential-led densities

	NDA (ha)	Units	DPH
Invicta, Harbourside, Bristol. UK	0.85	170	200
A Hammarby, Sjostad, Sweden			133*
B Millbay Docks a1, Plymouth, UK	0.8	102	127.5
Vauban, Freiburg, Germany			95**
IJburg, Amsterdam (Phase 1)			80***
C Newhall, Harlow, UK	1.6	84	52.5
Accordia, Cambridge, UK	9.5	378	40

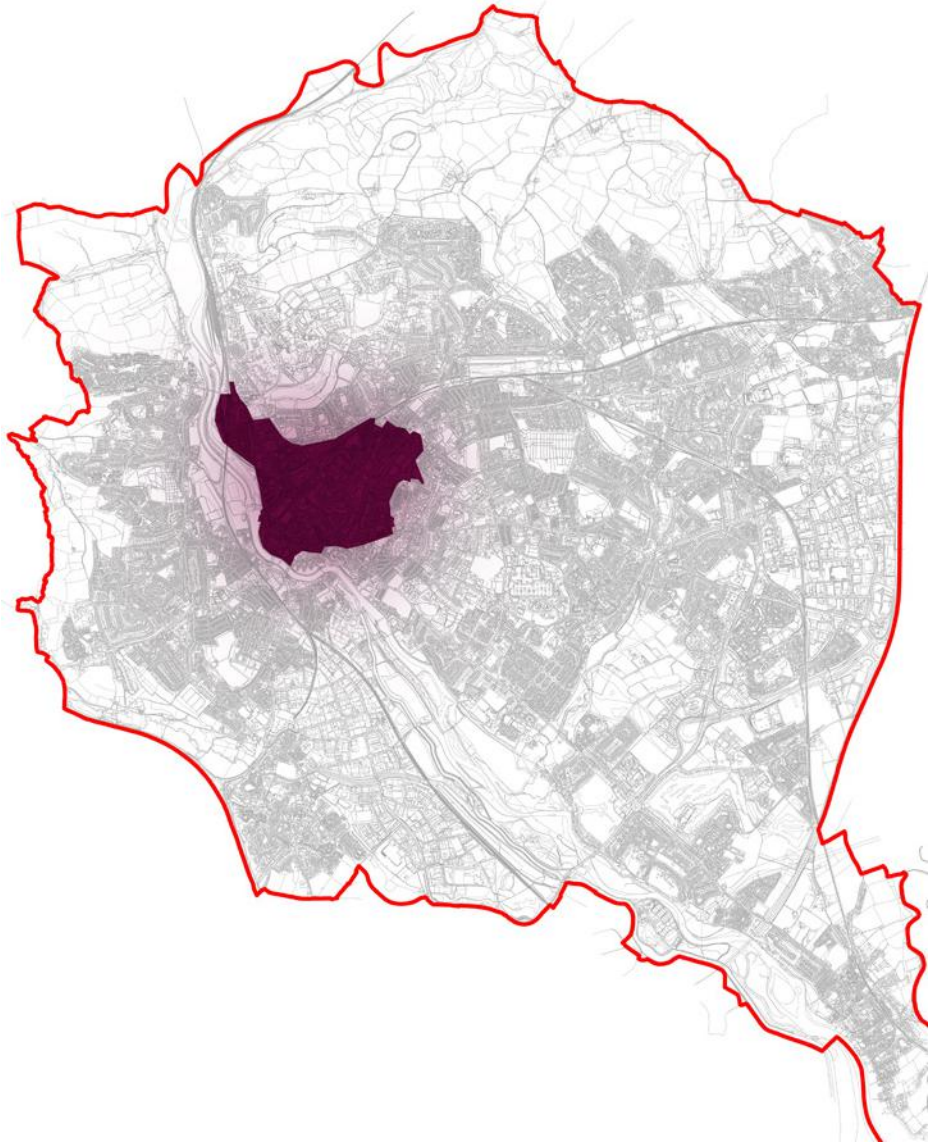
** Source: City of Stockholm*
*** Source: International Journal of Design & Nature and Ecodynamics*
**** Blended average of phase 1 and later phases, City of Amsterdam*

5. Recommendations

1:Increase the population density in the city centre

Promote a dense and more balanced mix of co-living, studio apartments, larger apartments and student accommodation to widen the city centre living offer for young professionals and older 'downsizers'.

* Recommend a significant uplift in residential densities within the city gates to create a genuine all day round city centre.
* Recommended minimum residential densities of 150 dph within the city centre.
* Recommended student accommodation/co-housing target density of 300-800 dph which is typically achievable within the existing height profile of the city.
* Prioritise mixed-use developments over townhouses wherever possible to enable other uses at ground floor, particularly on smaller sites of under 1 hectare.
* Encourage car free development in the city centre to encourage active ground floors, courtyard amenity space and active lifestyles.
* Recommend that analysis is undertaken to inform design guidance relating to building heights across the city centre and adjoining Conservation Areas in order to protect the setting of heritage assets, including near and long-distance views of the Cathedral.



2:Optimise density around public transport nodes and strategic cycle routes

Capitalise on the significant number of rail stations within Exeter as a driver of higher densities in these areas. Strategic cycle and walking routes should be complimented with higher density development to help to promote greater levels of use and focus investment and upgrades to make them more effective.

Local Station hubs

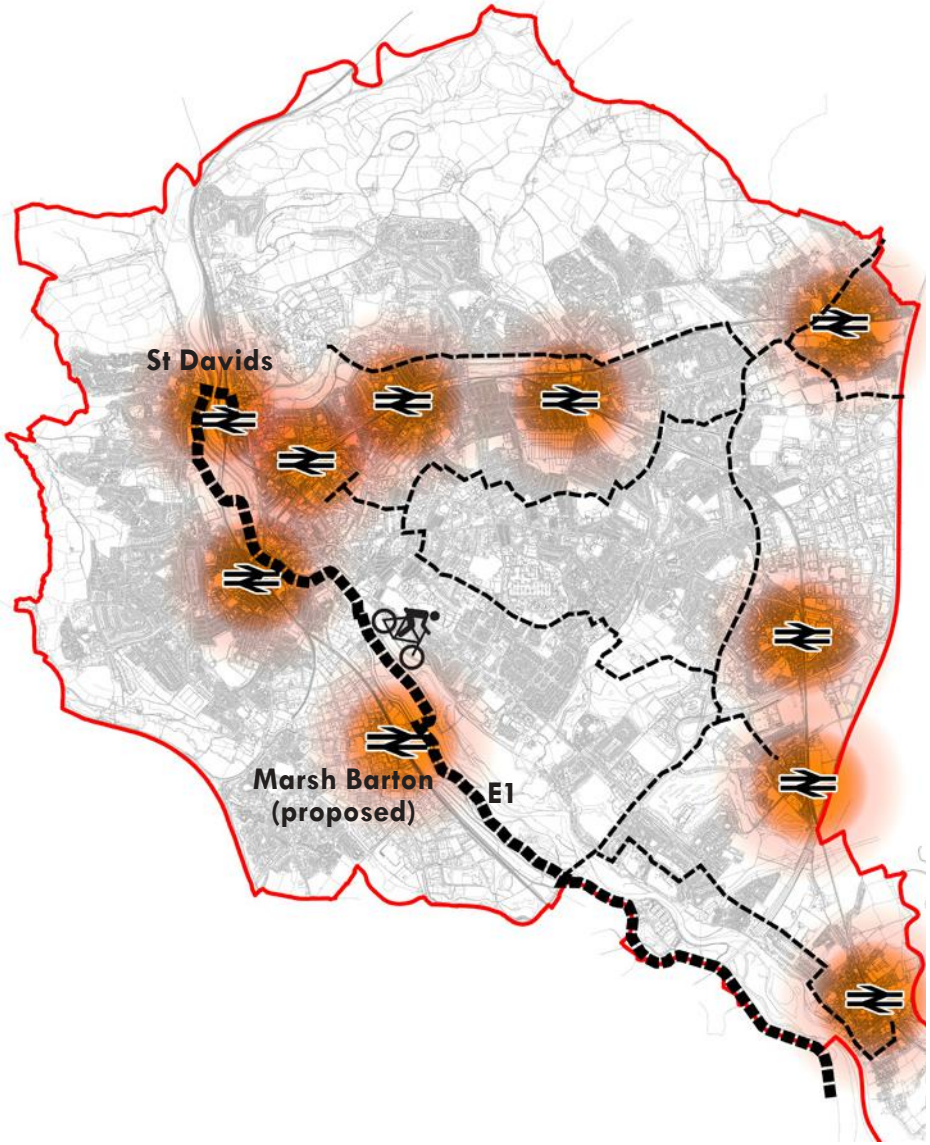
* Densify areas within 400m (5 minutes walk) of local train stations and encourage car free development. Refer to page 22 for specific minimum densities.
* A gradual tailing off of densities should occur away from stations to promote legibility.

Exeter St Davids station hub

* For areas within 400m (5 minutes walk) of Exeter St Davids station, recommended minimum residential densities of 120 dph to reflect its strategic importance and reinforce a sense of arrival. Car free development should be encouraged.
* Recommended student accommodation target density of 200-400 dph.

Strategic walking and cycle routes

* Recommended minimum residential densities of 80 dph for development close to the Exe cycle route (E1), refer to page 22.
* Recommended minimum densities of 60 dph for any developments close to other strategic cycle and walking routes, noting that some require investment to improve user experience and safety.



3: A Polycentric city- Enhancing the vibrancy and distinctiveness of existing local centres and linked villages

Support the polycentric development of Exeter through increasing densities in the linked villages to help support services and facilities that are local and distinctive from those in the city centre; and encouraging a blurring of uses within some areas of employment that enjoy close proximity to strategic cycle routes and rail hubs and have been identified within the Liveable Exeter Vision as having potential for residential development

Existing local centres

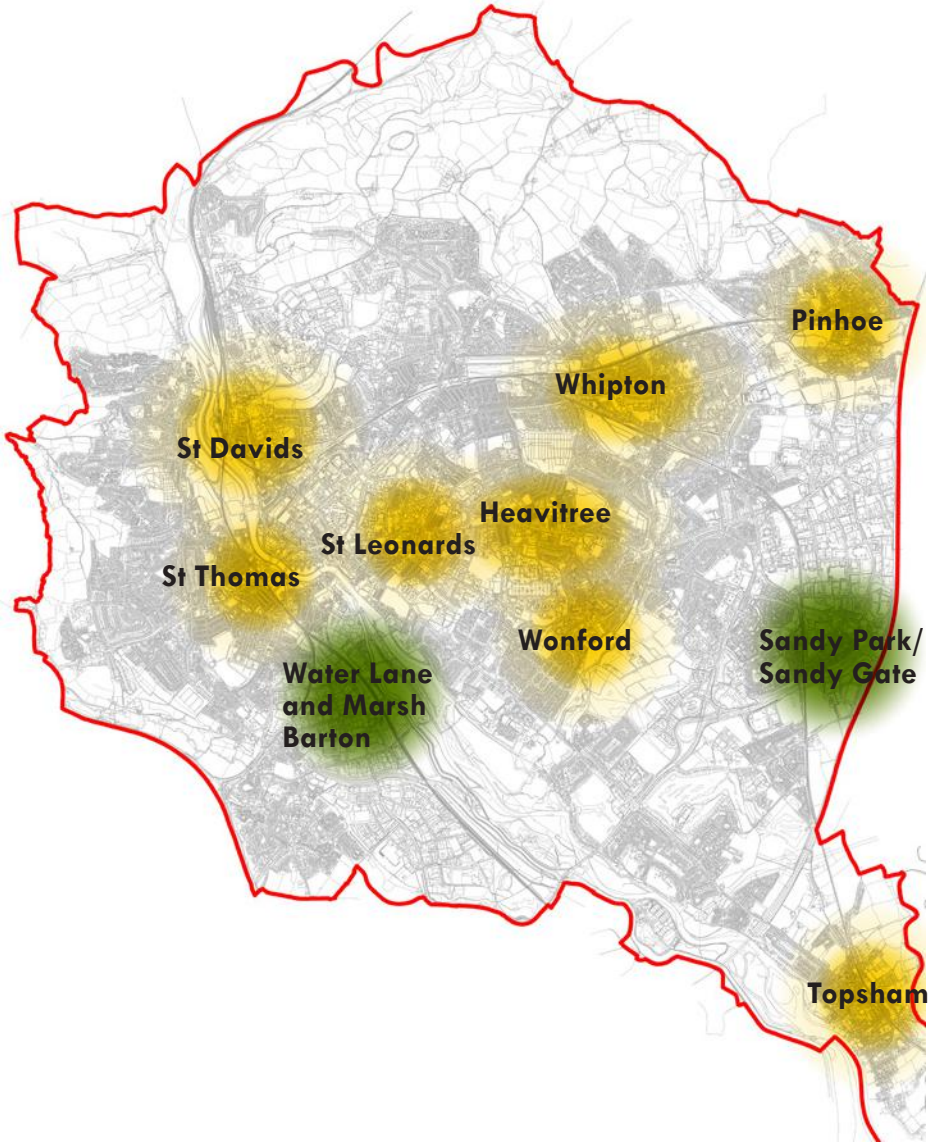
* Promotion of mixed-use apartment schemes with other ground floor uses along the main local centre streets. Minimum densities vary depending on context and proximity to rail hubs, but in a range of 80-120 DPH. Refer to Page 22.
* Promotion of high density assisted living schemes within these centres to ensure short walking distances to services.
* A gradual tailing off of densities should occur away from the main streets/rail stations to promote legibility.

Water Lane & Marsh Barton

* Recommended minimum residential density of 120 dph for any phase including residential within the Marsh Barton area to create an instant impact; establish a critical mass of people from the outset; and reflect proximity to the key E1 river Exe strategic cycle route and the forthcoming Marsh Barton rail station.
* Recommend the use of live/work typologies and apartments above workspaces where practicable.

Sandy Park/Sandy Gate

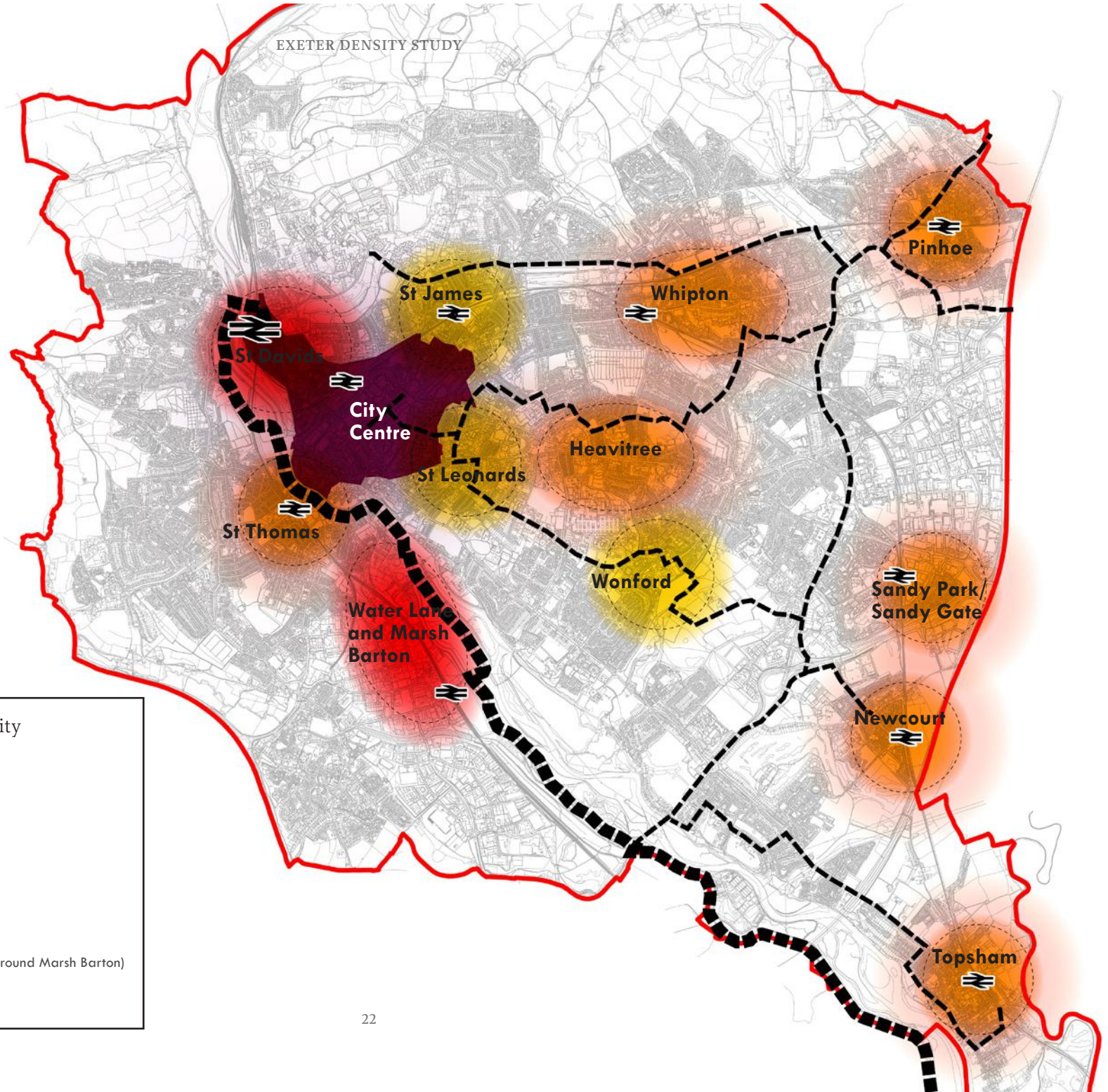
* Recommended minimum density of 100 dph within 800m (10 minutes walk) of Sowton rail station, using predominantly mixed-use blocks.
* Recommend the use of live/work typologies and apartments above workspaces where practicable



6. Minimum density plan

The following plan takes into account the drivers of density on the preceding pages to arrive at areas of recommended densification. In cases where there are multiple drivers of density, the highest minimum density takes precedence.

Other areas that do not fall within the identified areas shown on the plan should aim for a minimum average density of **50 dph** across sites, and should look to optimise density further where appropriate.



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