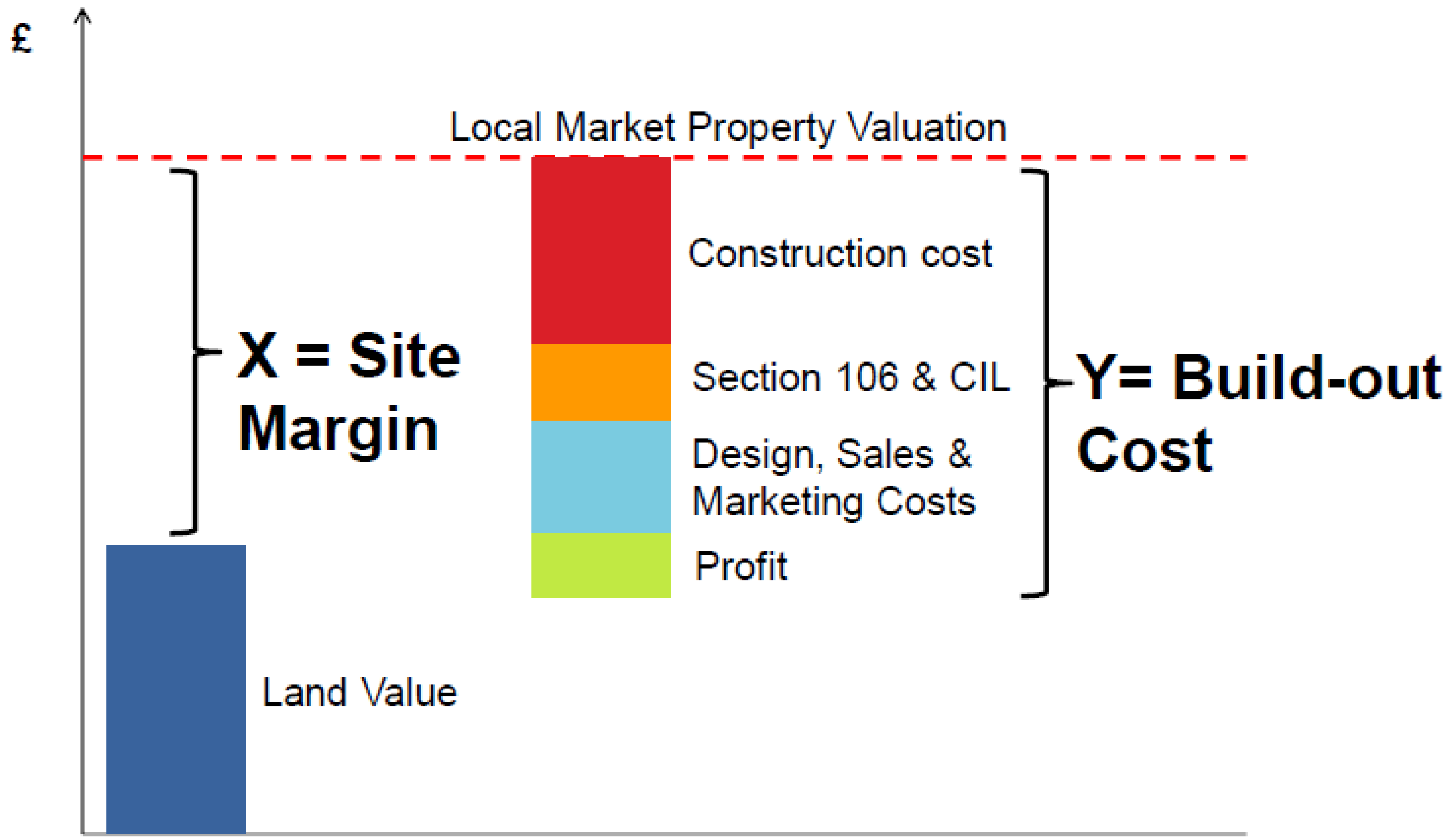
Offsite Housing Review

Buildoffsite and RICS event

March 26th, 2013

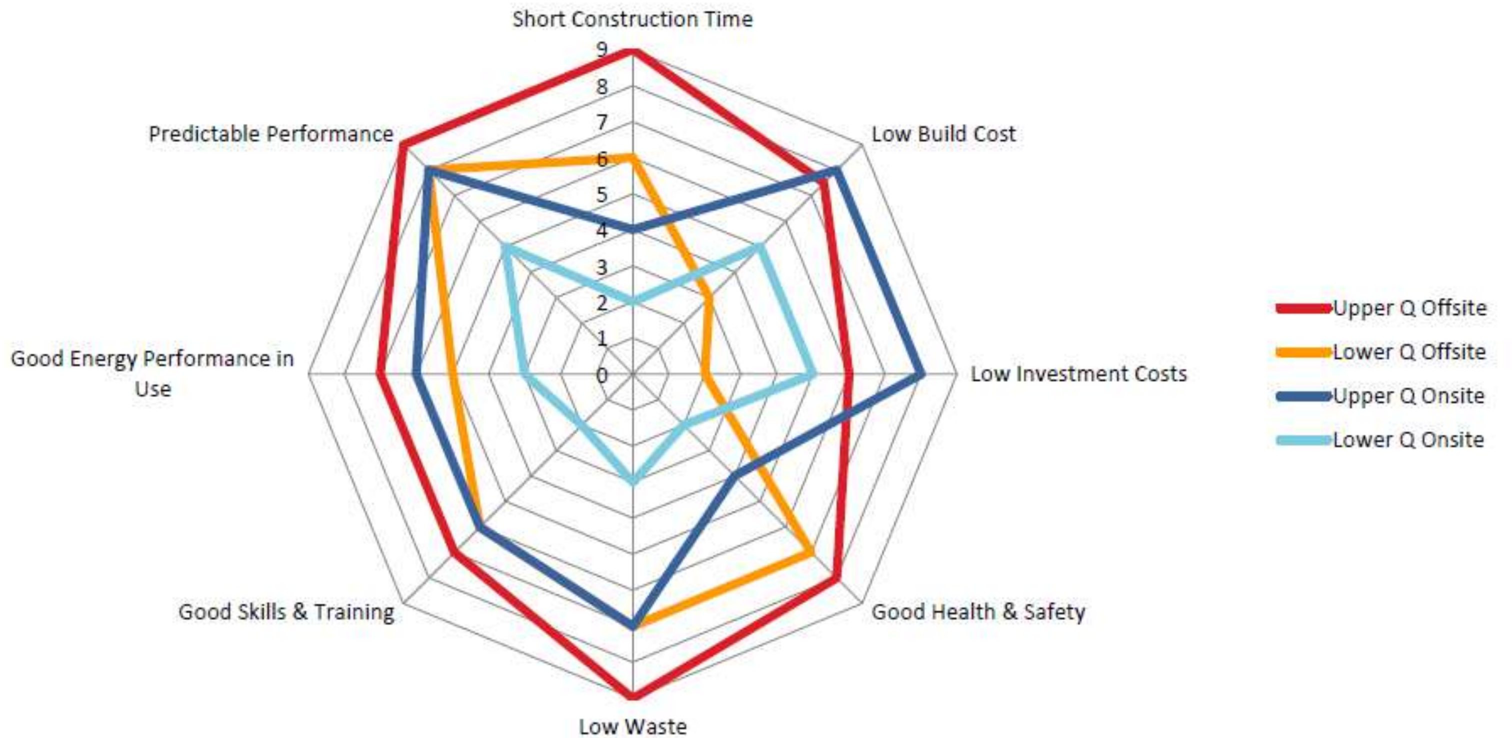
Nick Whitehouse



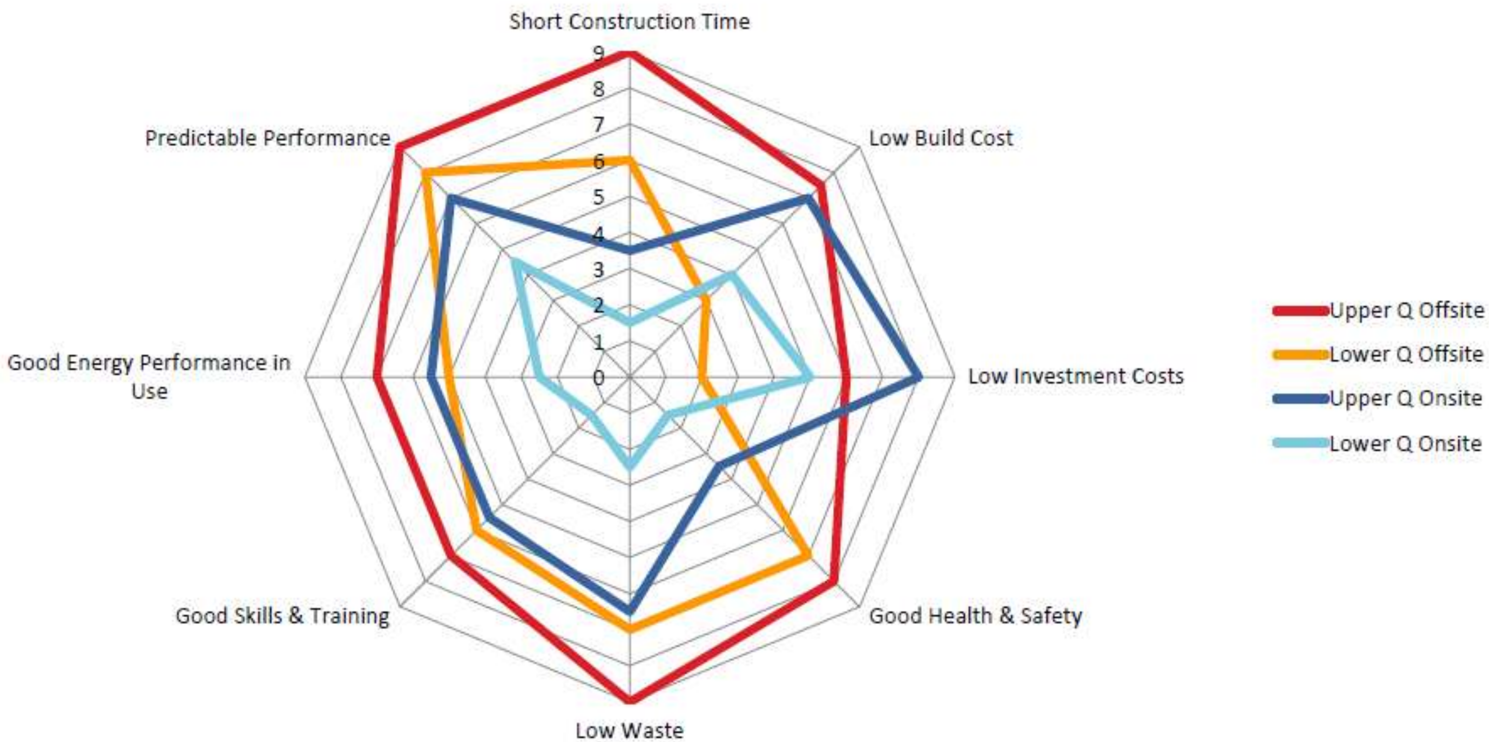
The Decision to Build

(If Y>X, site is uneconomic)

Offsite vs. Onsite: Current Building Regulations Part L



Offsite vs. Onsite: Passive House Fabric Performance



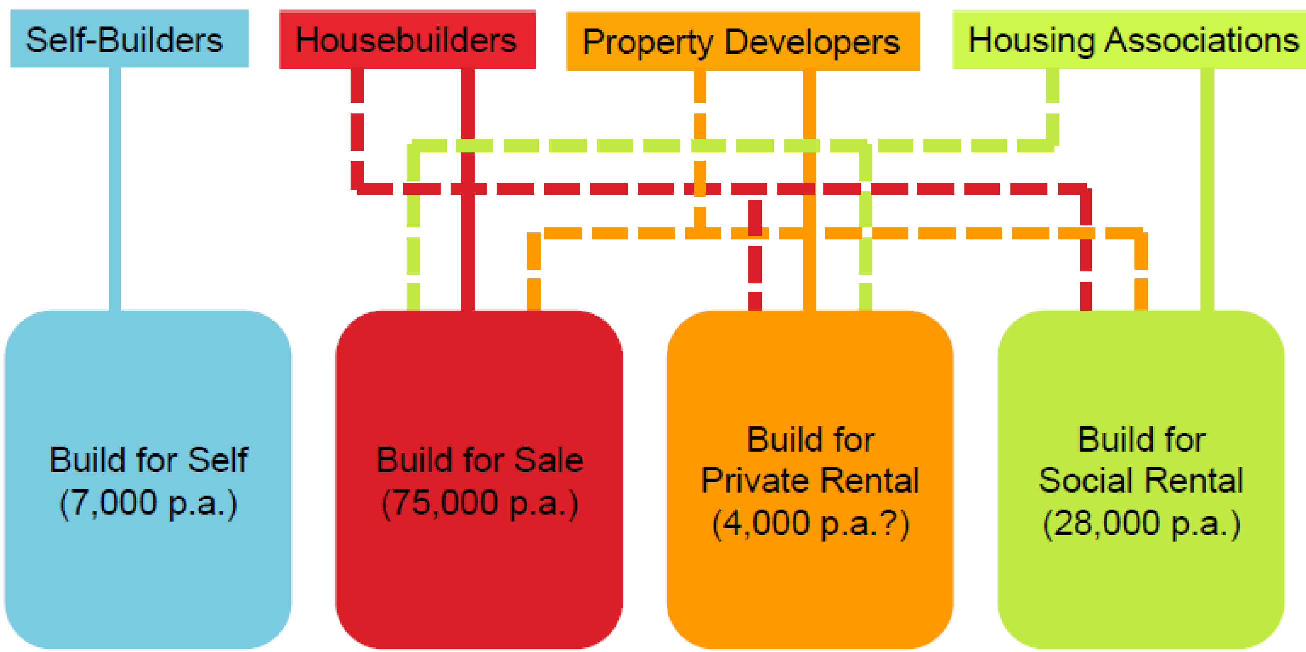
Orig: NW 28/09/2012

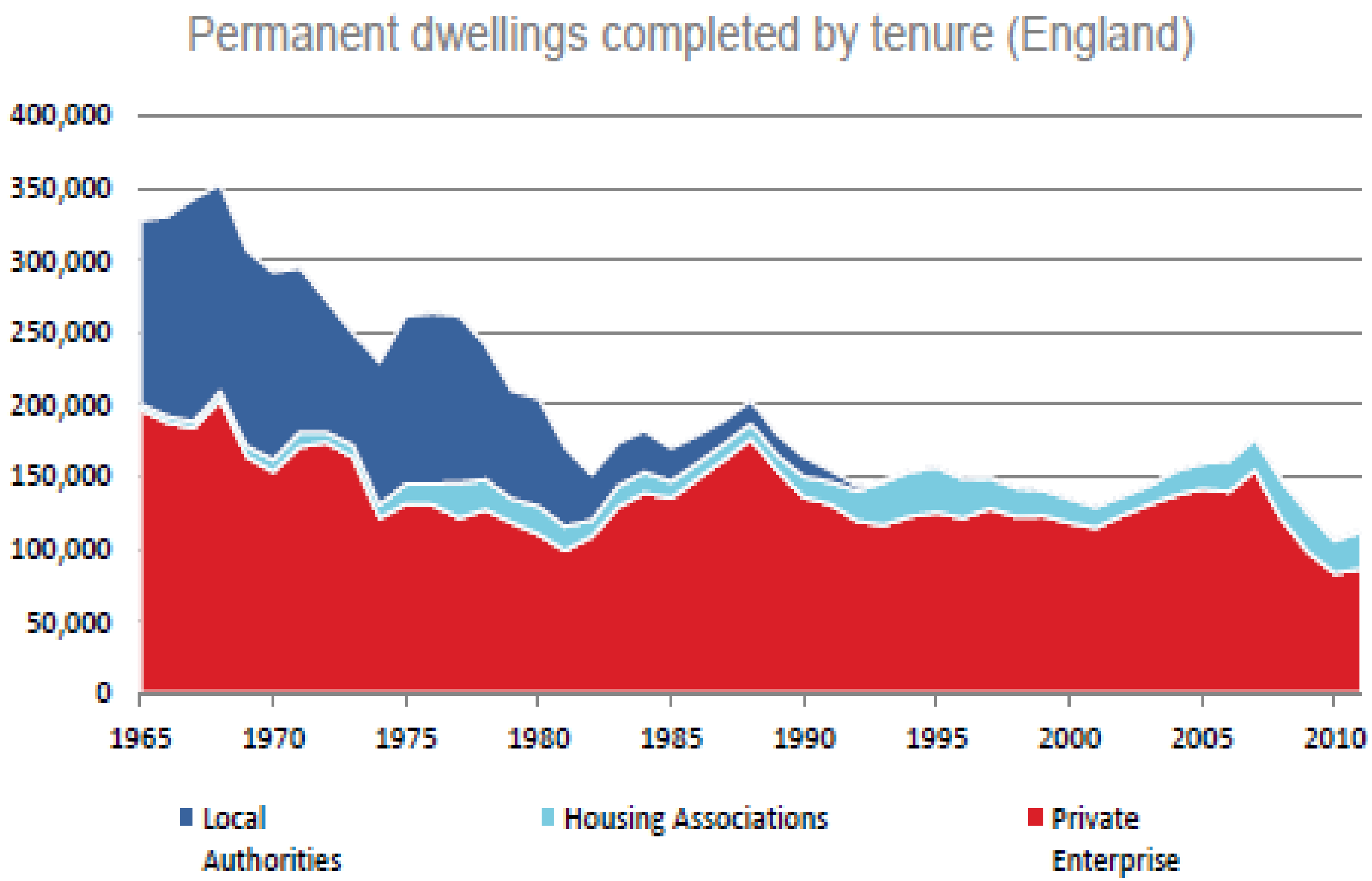
Issue	Improvement over Conventional Construction (estimated)	Benefit to Society	Benefit to Housebuilder
SOCIAL			
Reduced Accidents & Incidents (H&S)	Up to 80%	Large	Large
Improved Working Conditions and Job Security	Significant	Significant	Small
ENVIRONMENTAL			
Reduced Road Traffic Movements (Congestion & Pollution Benefits)	Up to 70% (40%)	Significant	Small
Reduced Energy Used on Site	Up to 80% (50%)	Small	Small
Reduced Waste	Up to 90%	Significant	Significant
Reduced Energy-in-Use	20% (typical)	Significant	Small (unless house builder is also the property owner)
ECONOMIC			
Faster Construction	Up to 80% time compression on site	Significant	Large (reduced construction financing costs)
Alternative Business Model	Payment on completion	Small	Large (reduced working capital requirement)
Fewer Defects	Up to 80%	Small	Significant
NOTE: Figures in parenthesis include adjustments for delivery journeys to the factory and energy consumed during the manufacturing process.			

1940’s

1970’s

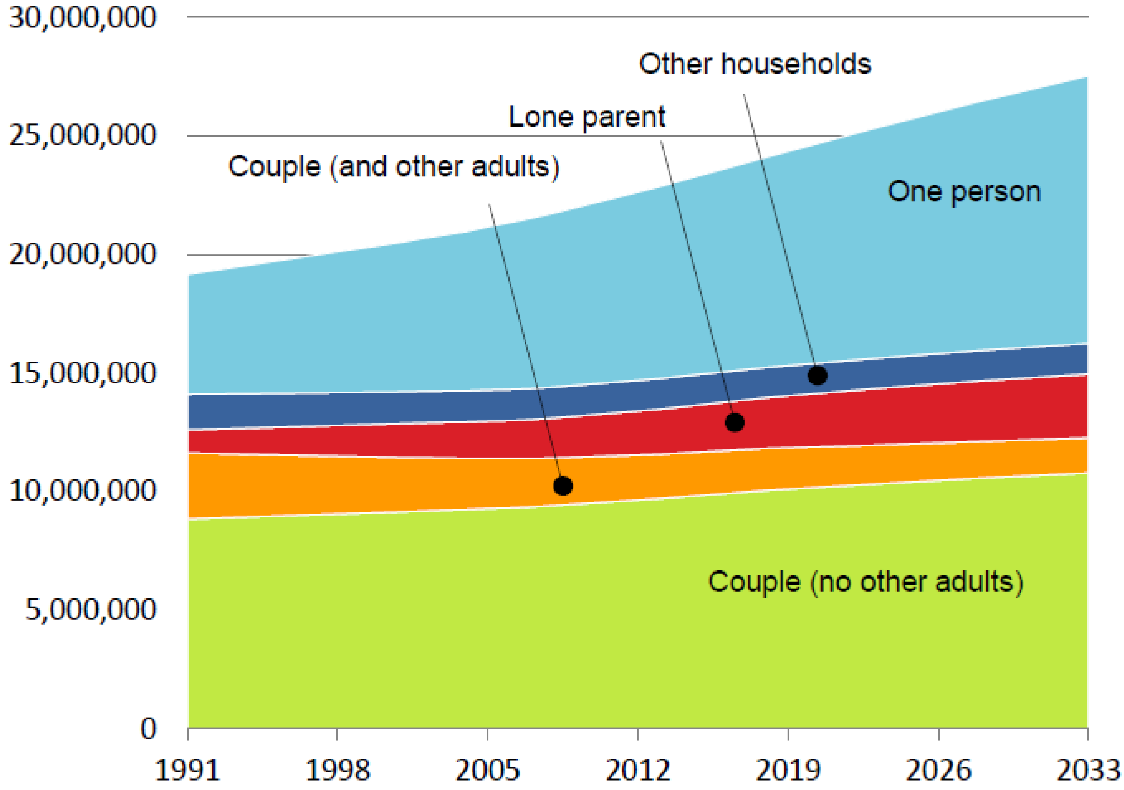
2000’s


Self-Builders
Housebuilders
Property Developers
Housing Associations
Build for Self (7,000 p.a.)
Build for Sale (75,000 p.a.)
Build for Private Rental (4,000 p.a.?)
Build for Social Rental (28,000 p.a.)

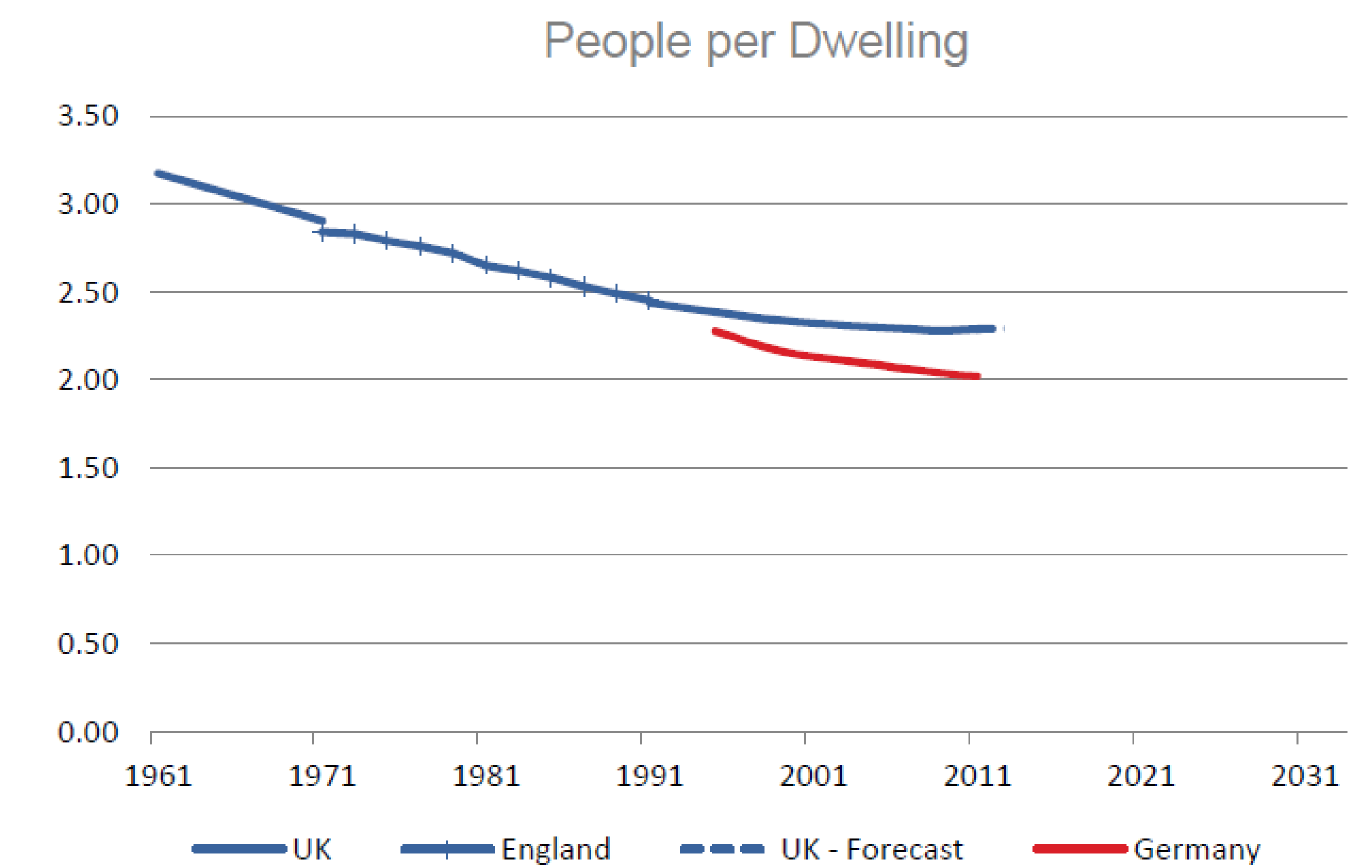


Source: DCLG, 2012

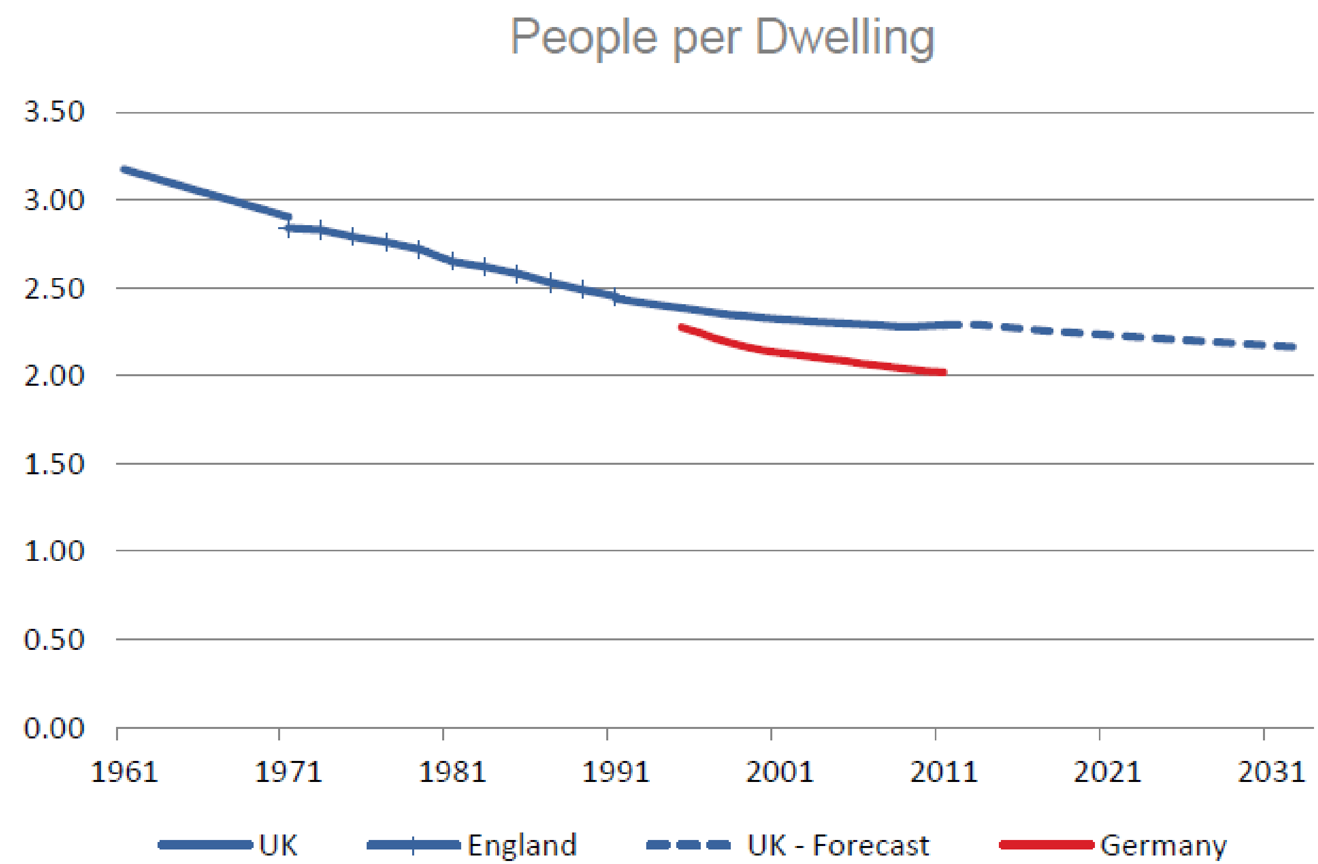
Projected number of households by household type (England)



Source: DCLG, 2010

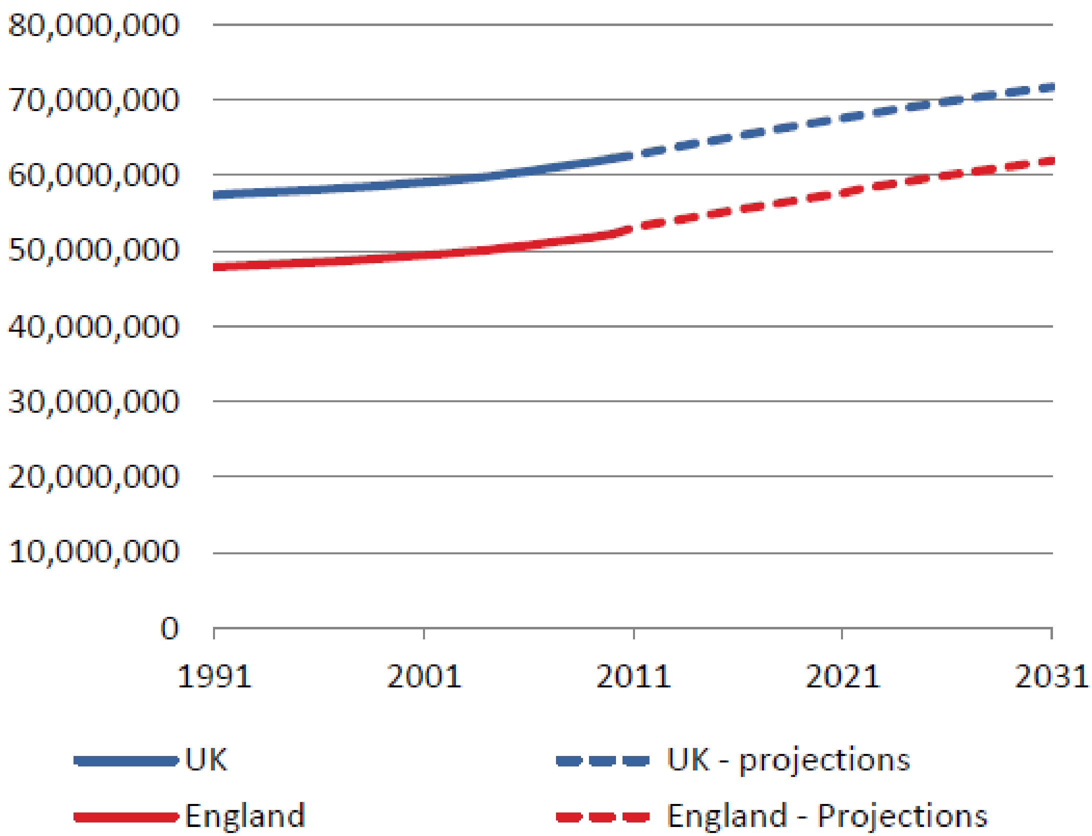


Source: DCLG, ONS, Statistishes Bundesamt Deutschland



Source: DCLG, ONS, Statistishes Bundesamt Deutschland

Population Projections



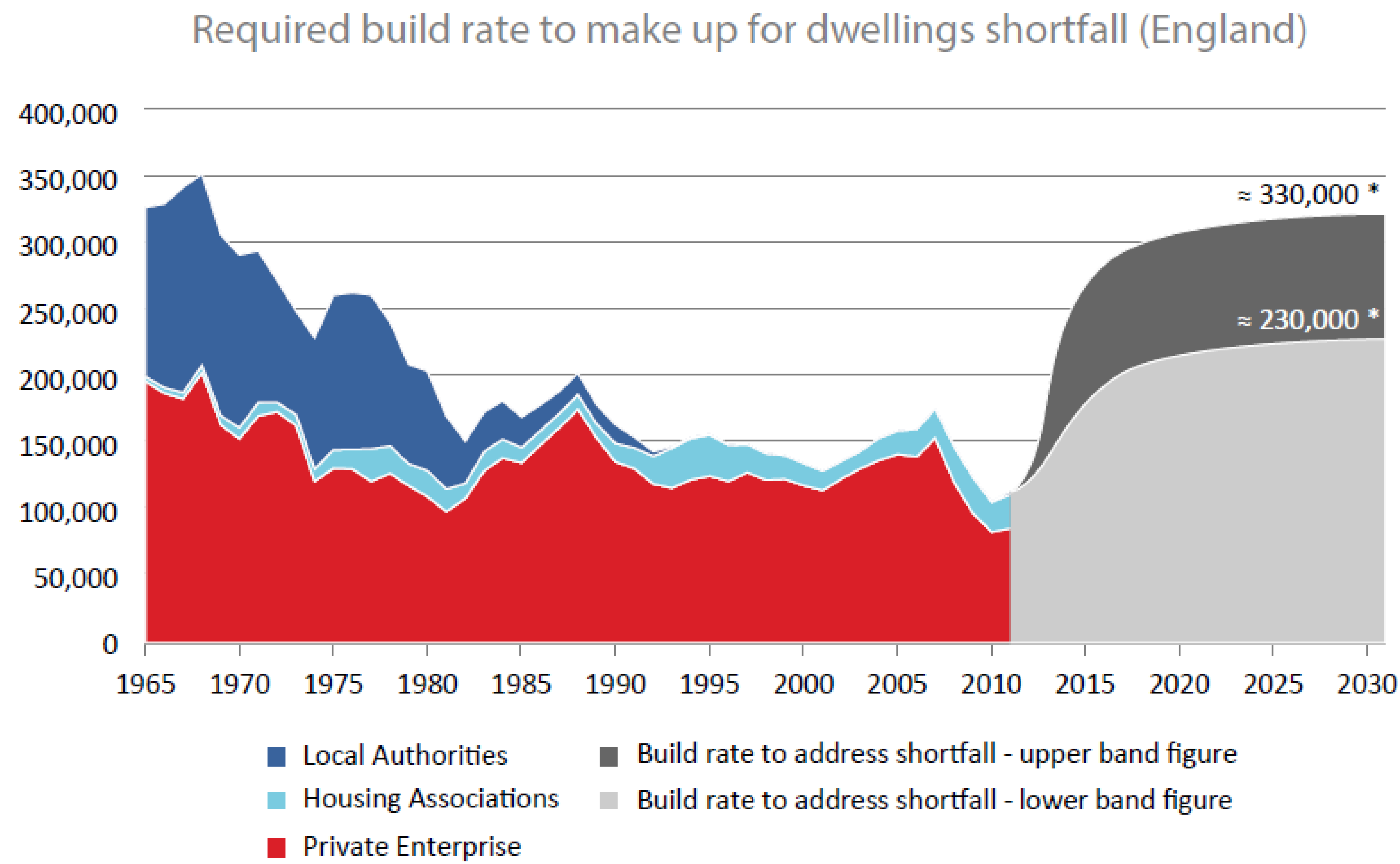
Source: ONS, 2011; own calculations

Forecasting housing need in England

Year	Population	Dwellings	People per Dwelling
1961	43,500,000	14,000,000	3.11
1981	47,000,000	18,000,000	2.61
2001	49,500,000	21,000,000	2.36
2011	53,000,000	23,000,000	2.30
2031	62,000,000 ?	27,500,000 ?	2.25 ? *
2031	62,000,000 ?	29,500,000 ?	2.1 ? *

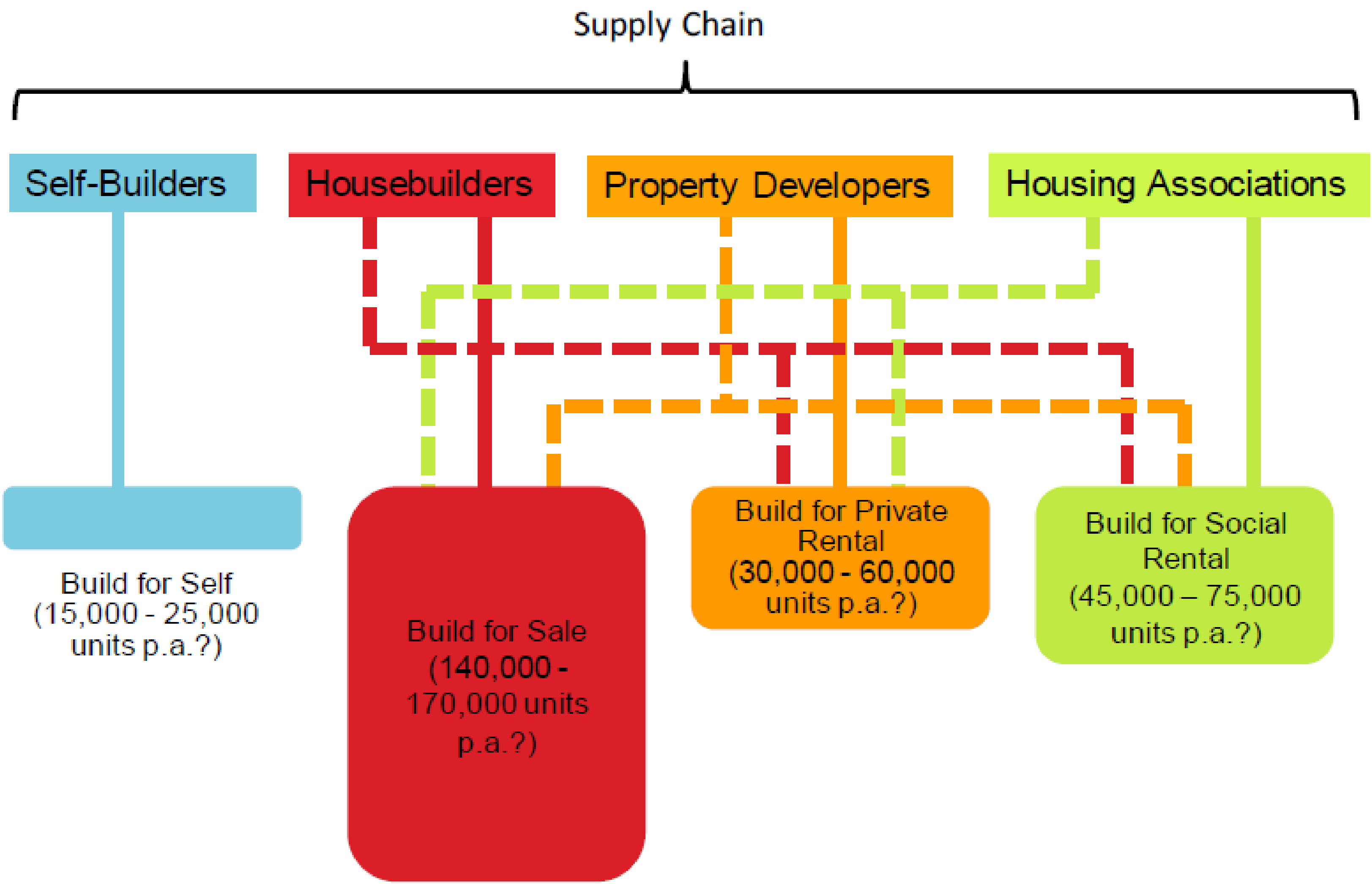
* This range of figures is obtained by extrapolating the trend line for England (2.25) or, alternatively, extrapolating the trend line for the UK and assuming that England converges to that line (2.1)

Source: ONS, 2011; DCLG 2012; own calculations



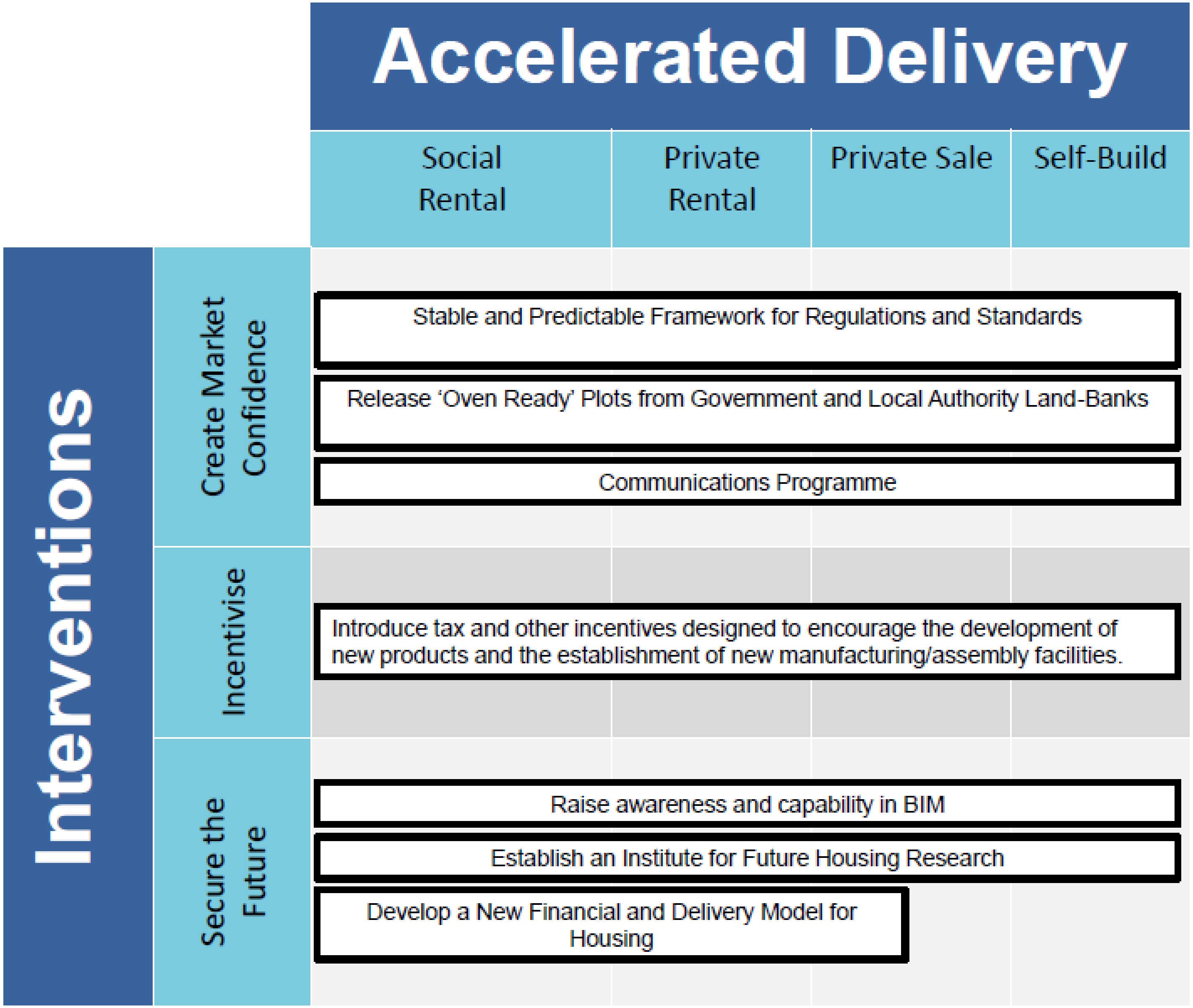
Source: DCLG, own calculations

* These upper and lower band figures are based on different assumptions about the future convergence of occupancy trends for England and the UK as explained in the preceding table



The Future Shape of the Market?

Sector	Product	Price-point (£/sq.ft.)	Desired Characteristics	Current Volumes (2013: units p.a.)	Projected Volumes (2020: units p.a.)
Self-Build	Single family homes	£100-150/sq.ft.	Low construction risk; speedy construction	7,000	15,000 - 25,000
Build for Sale	Predominantly single family homes, with a significant minority of flats/apartments	£40-60/sq.ft.	Low cost, low construction risk, flexible construction programme	75,000	140,000 - 170,000
Build for Private Rental	Flats and apartments – predominantly medium-rise.	£100-150/sq.ft.	High quality, low construction risk, speedy construction	4,000(?)	30,000 - 60,000
Build for Social Rental	Predominantly low-rise flats & apartments, with a significant minority of single family homes	£80-100/sq.ft.	Durable, low maintenance dwellings; speedy construction.	28,000	45,000 - 75,000

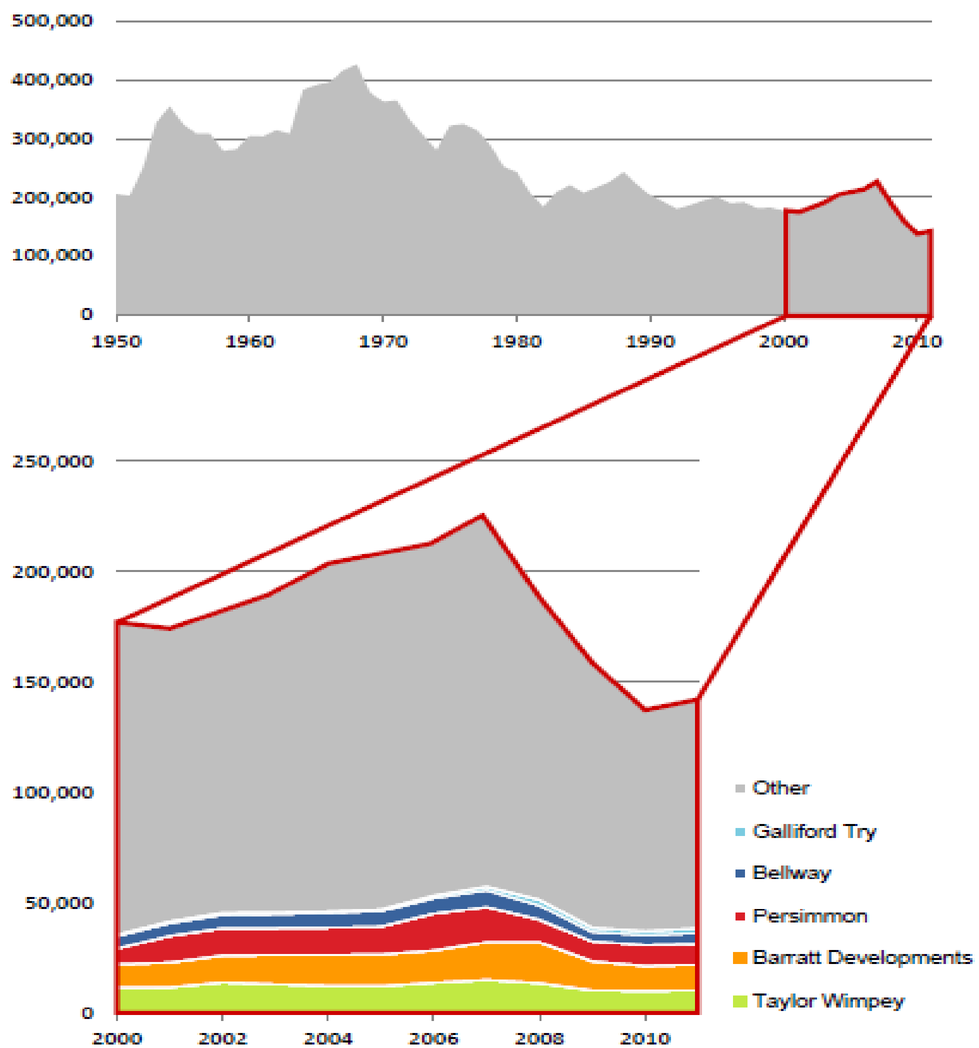

Accelerated Delivery
Social Rental
Private Rental
Private Sale
Self-Build
Interventions
Create Market Confidence
Stable and Predictable Framework for Regulations and Standards
Release 'Oven Ready' Plots from Government and Local Authority Land-Banks
Communications Programme
Incentivise
Introduce tax and other incentives designed to encourage the development of new products and the establishment of new manufacturing/assembly facilities.
Secure the Future
Raise awareness and capability in BIM
Establish an Institute for Future Housing Research
Develop a New Financial and Delivery Model for Housing

Offsite Housing Review

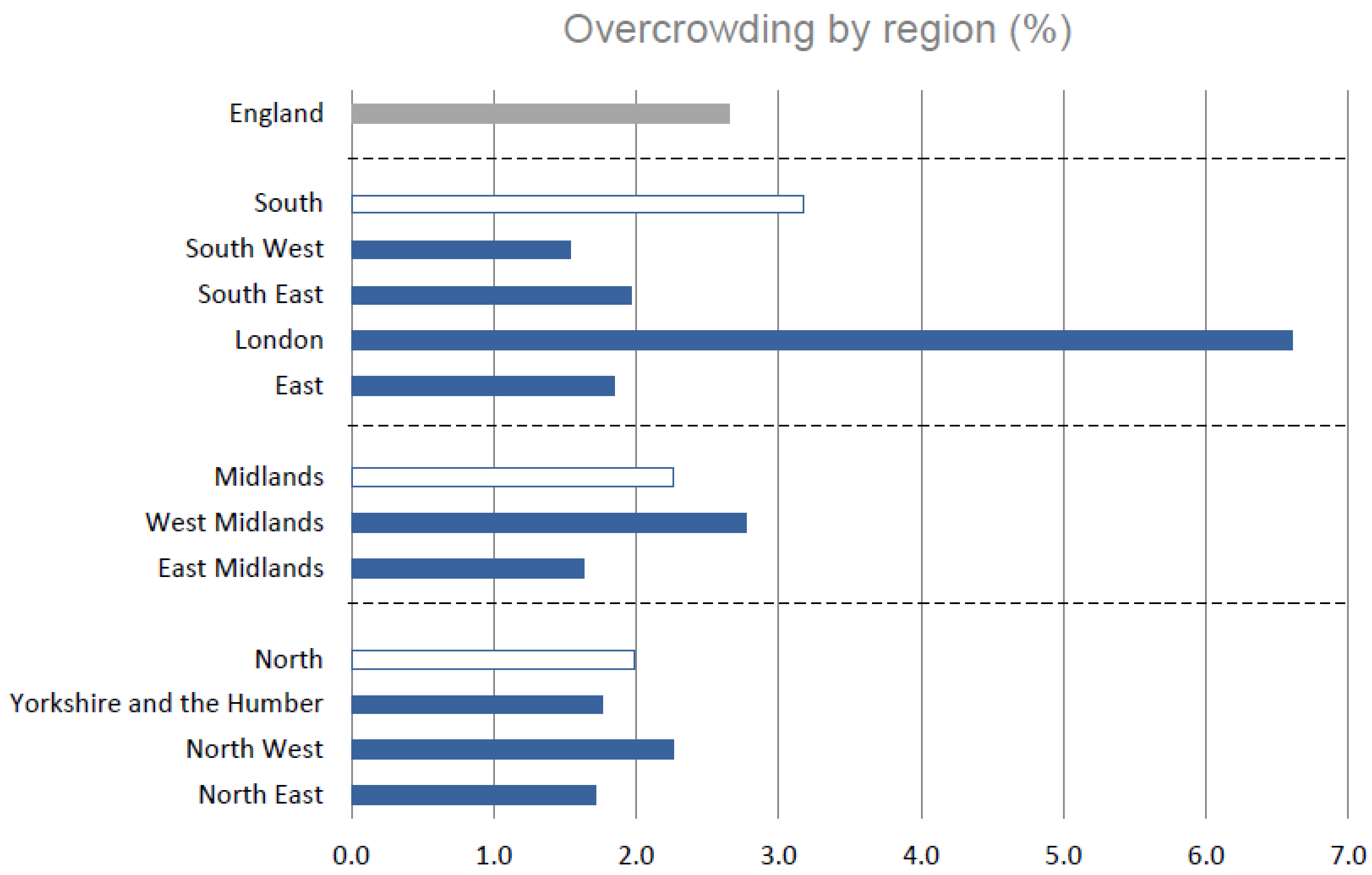
Construction Industry Council

March 20th, 2013

Permanent dwelling completions by housebuilder in the UK

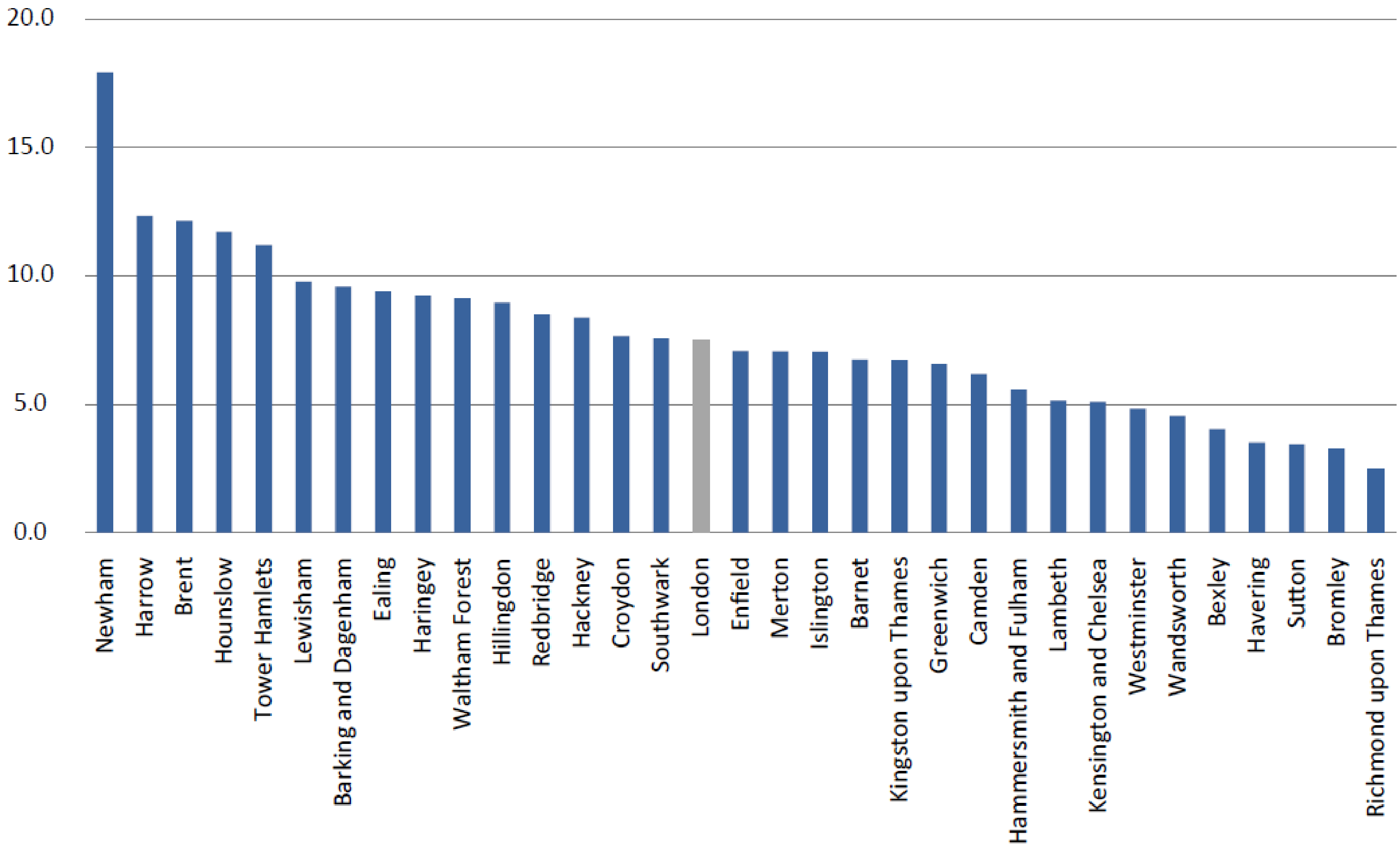


Source: DCLG, Housebuilders' Annual Reports



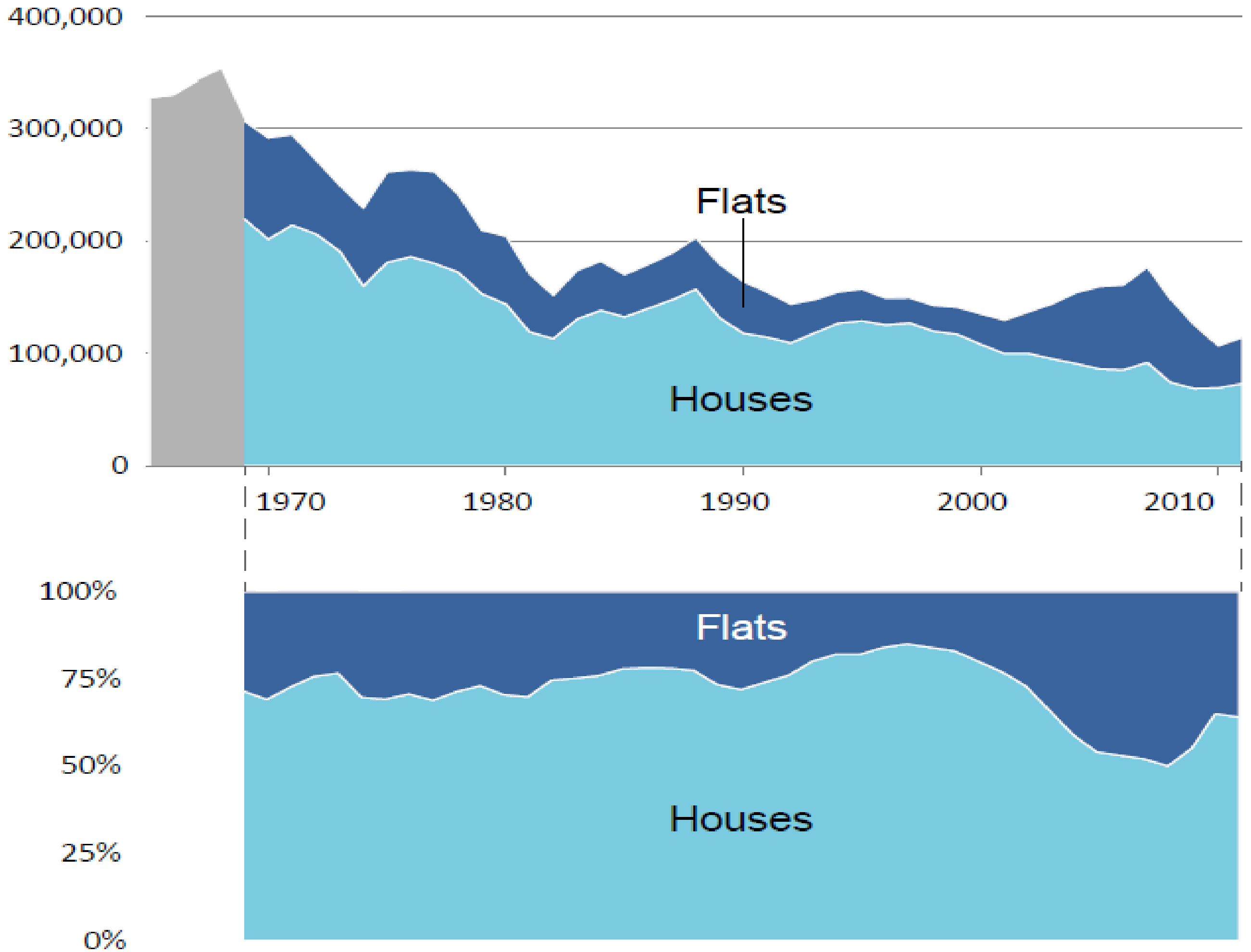
Source: DCLG Survey of English Housing, 2007

Percentage of overcrowded Households in London Boroughs



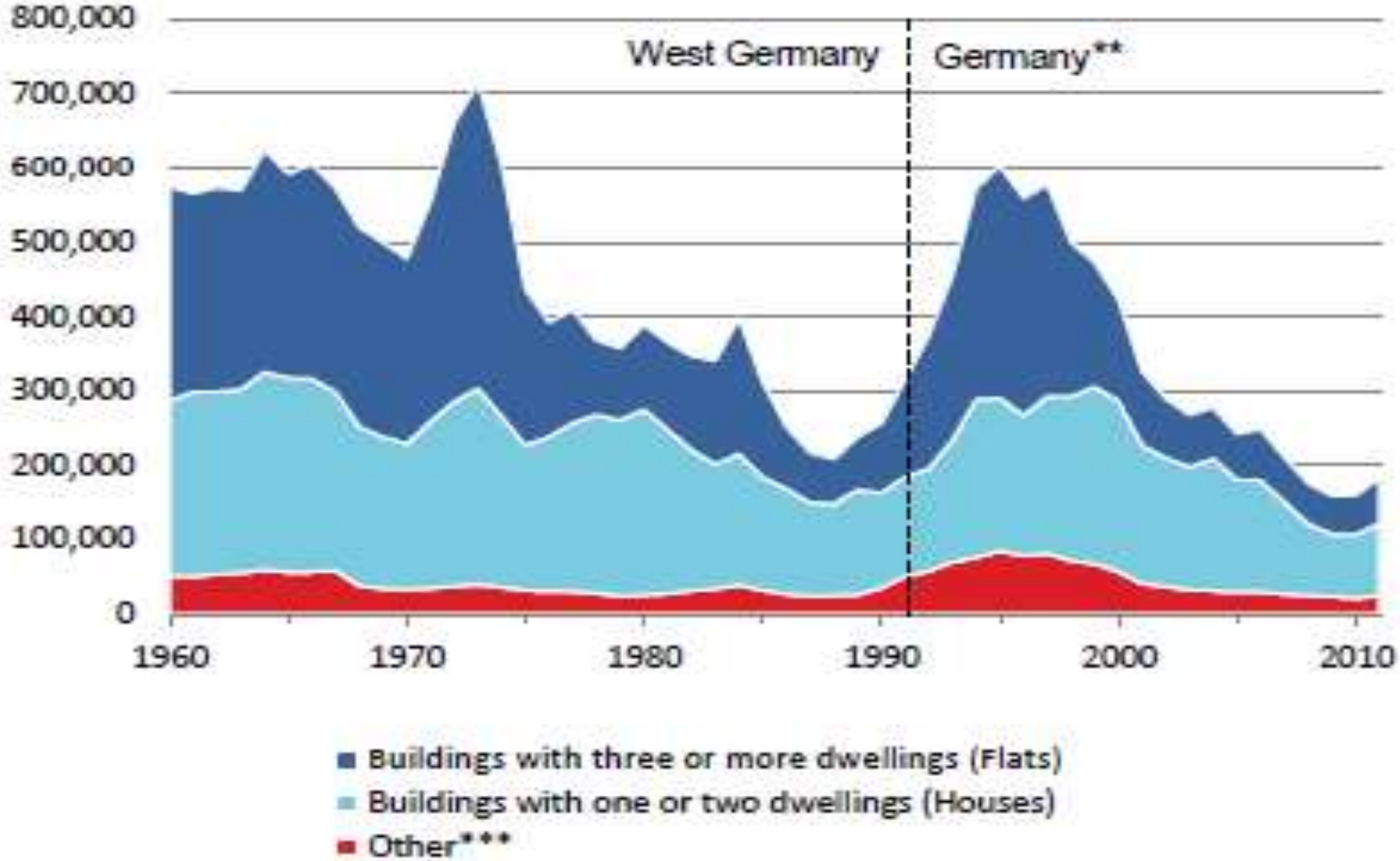
Source: Greater London Authority, 2010

House/flat split in England



Source: DCLG

Dwelling completions by type of building*



*Excluding building extensions
**Data on building type was not available for Germany in 1991 and 1992. Therefore data for West Germany is shown during these years.
***Dwellings in non-residential buildings, existing buildings and residential hostels

Source: Statistisches Bundesamt Deutschland