The Convenient Remedy for the Inconvenient Truth

with apologies to Al Gore. . .and John Norquist!

The Prince's Foundation
FOR THE BUILT ENVIRONMENT

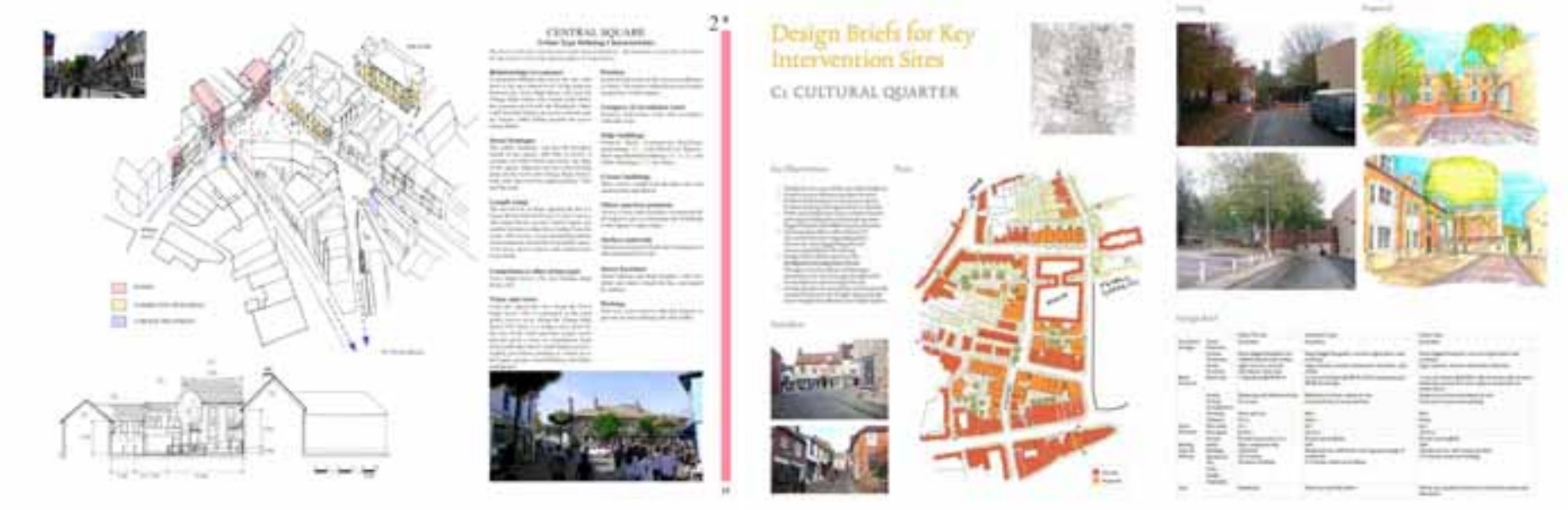
Hank Dittmar

The Prince’s Foundation

The Prince's Foundation for the Built Environment is an educational charity founded by HRH The Prince of Wales to improve the quality of people’s lives by teaching and practising timeless *and ecological* ways of *planning, designing* and building.

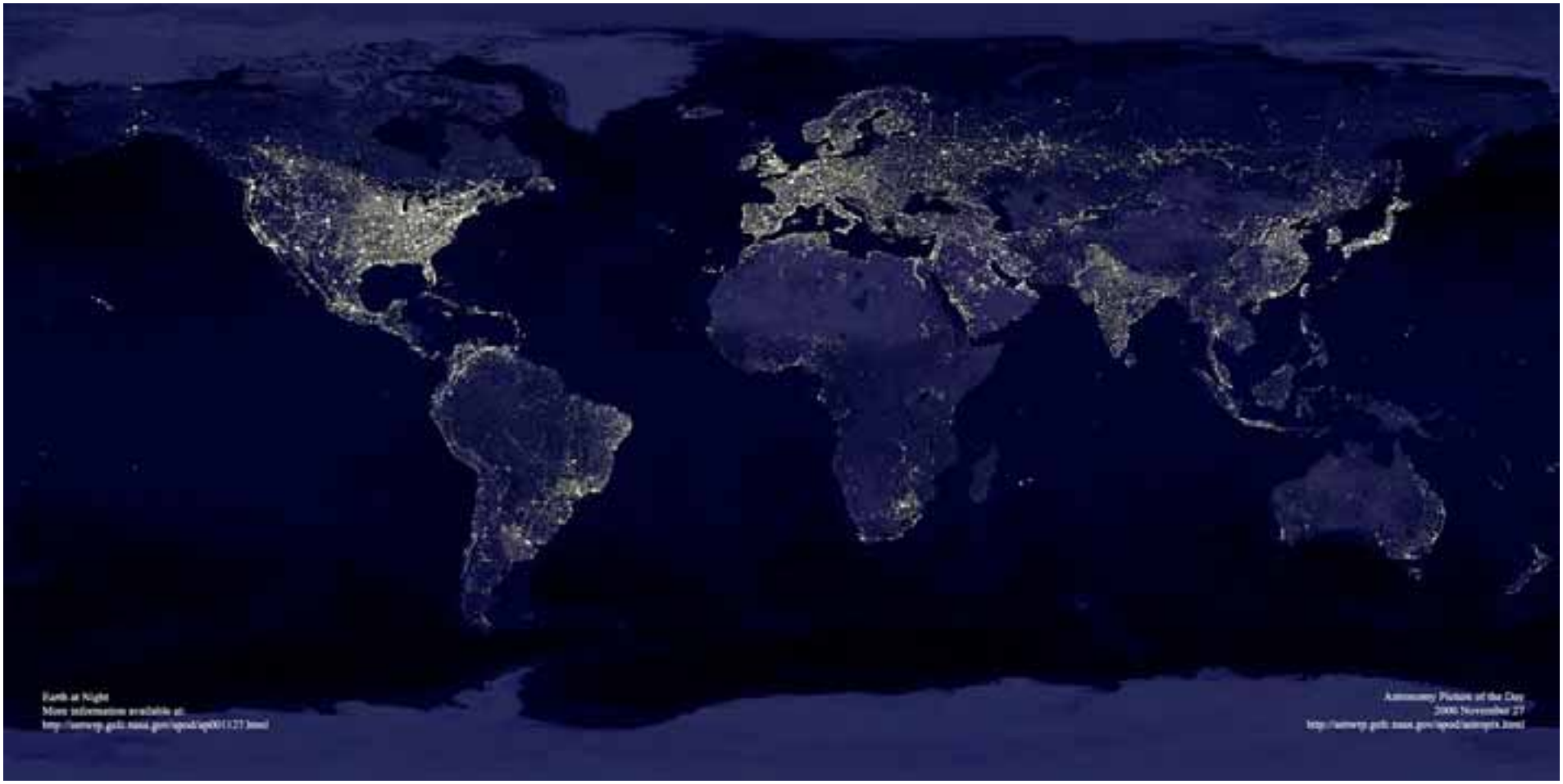
We are one of 18 charities for which the Prince of Wales is President, together we comprise the largest multi-cause charitable enterprise in the United Kingdom.

New Tools for Planning, Building and Design

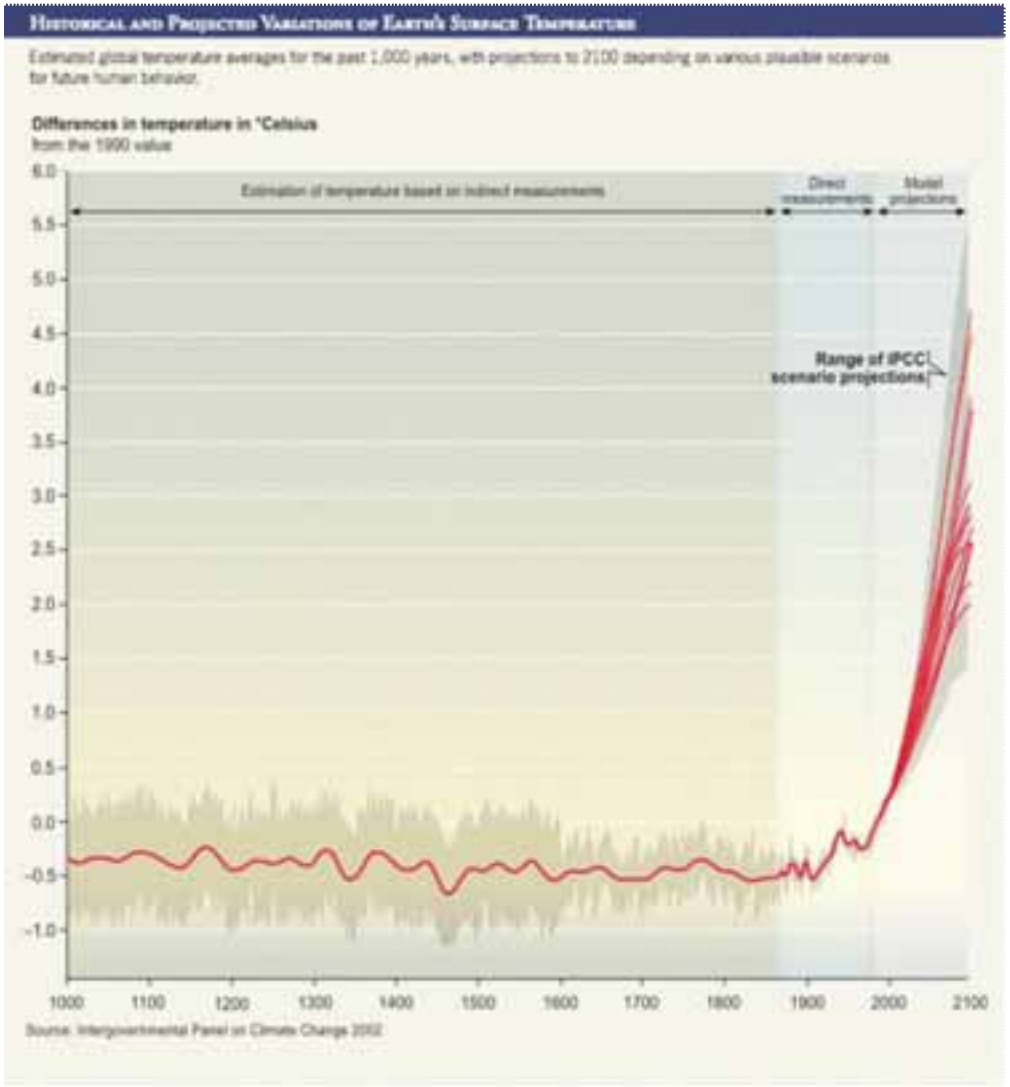


- Enquiry by Design: intensive method for stakeholder engagement and consensus building around master plans;
- Design coding: graphic instructions for translating plan to reality, streamlining process of planning and improving performance; and
- Pattern books: tool for improving quality of community planning and design for use by house builders.

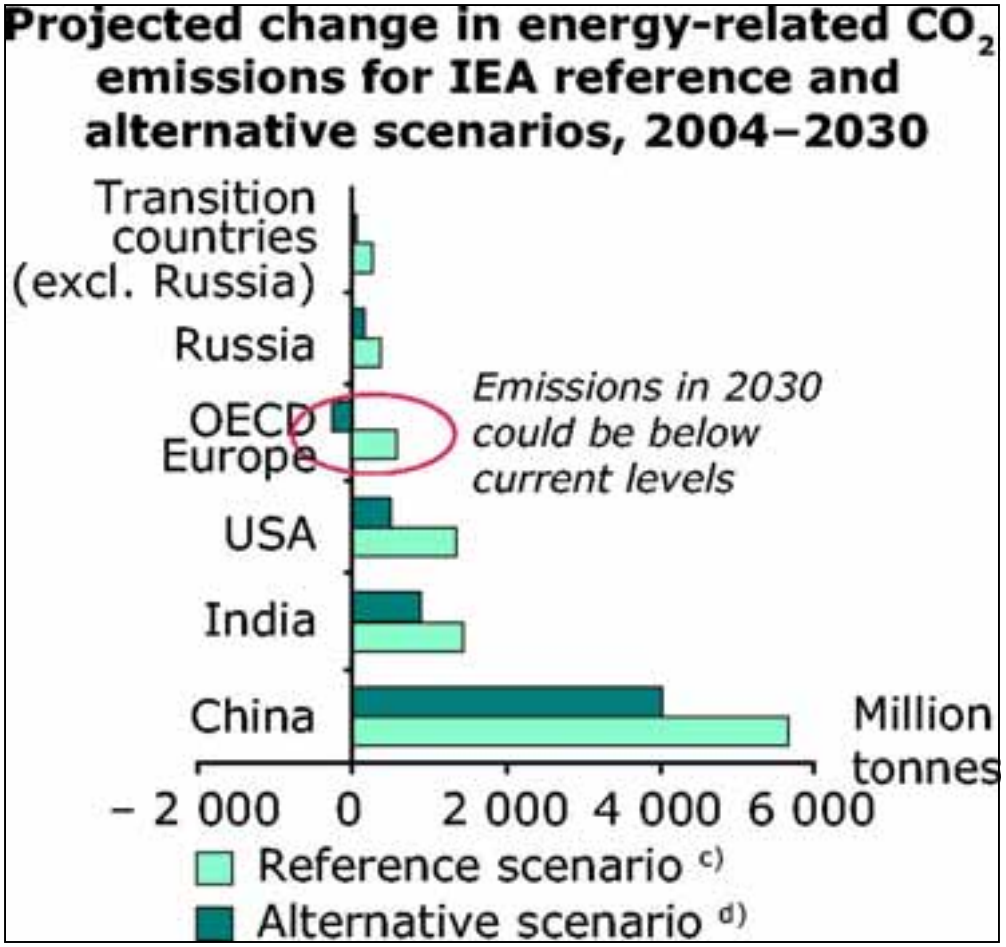
2.1 Billion More In Cities by 2030



IPCC: Rise in Global Temperature

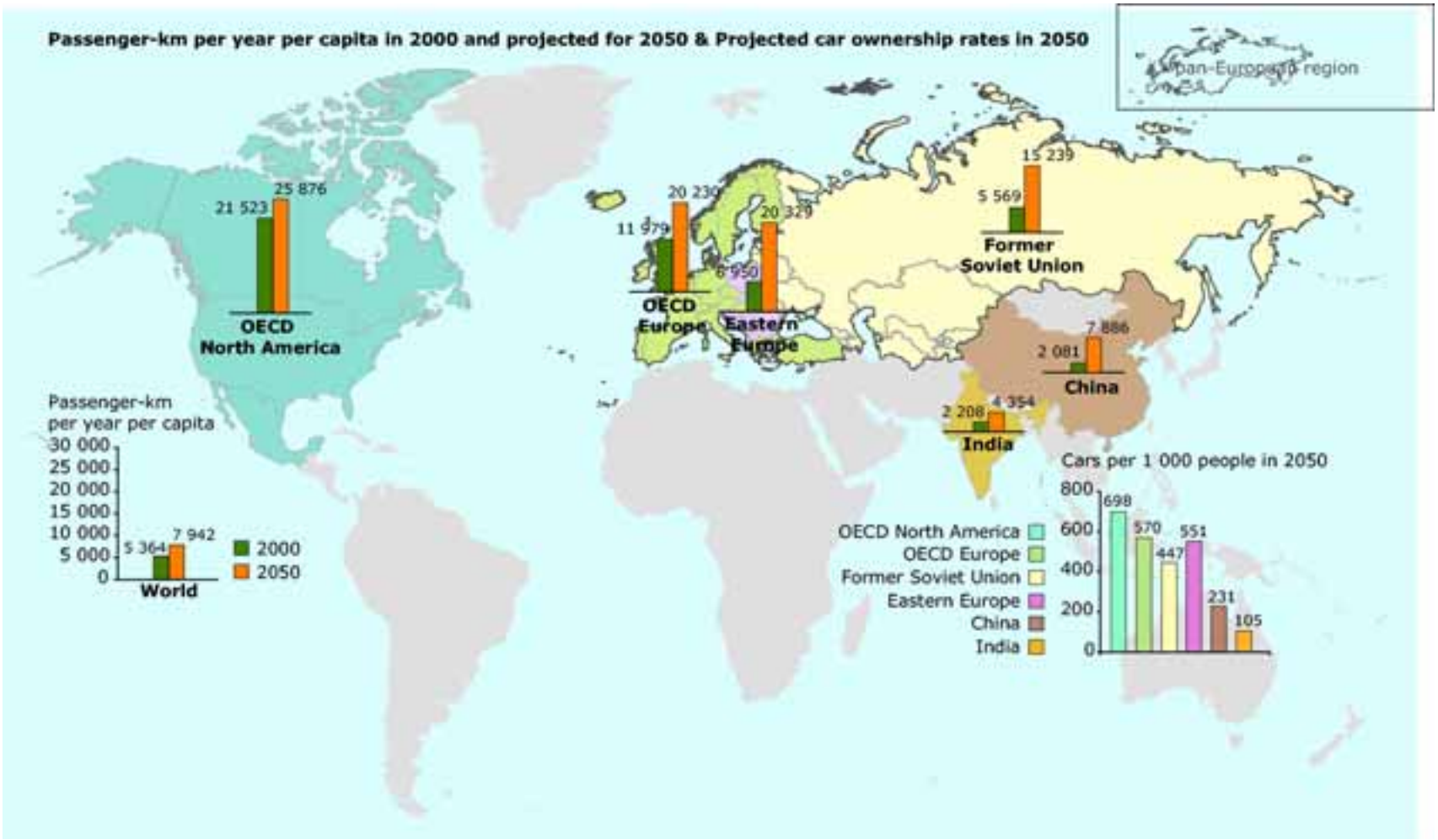


CO2 Trends 2004-2030



http://www.eea.europa.eu,Copyright EEA, Copenhagen, 2007.

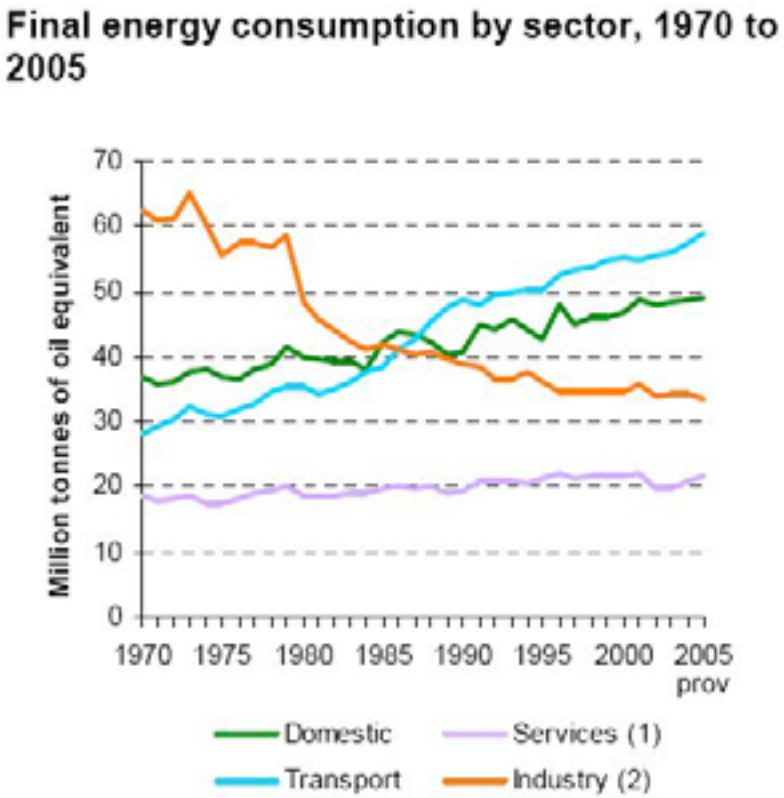
Passenger Car Travel and Ownership: 2000-2050

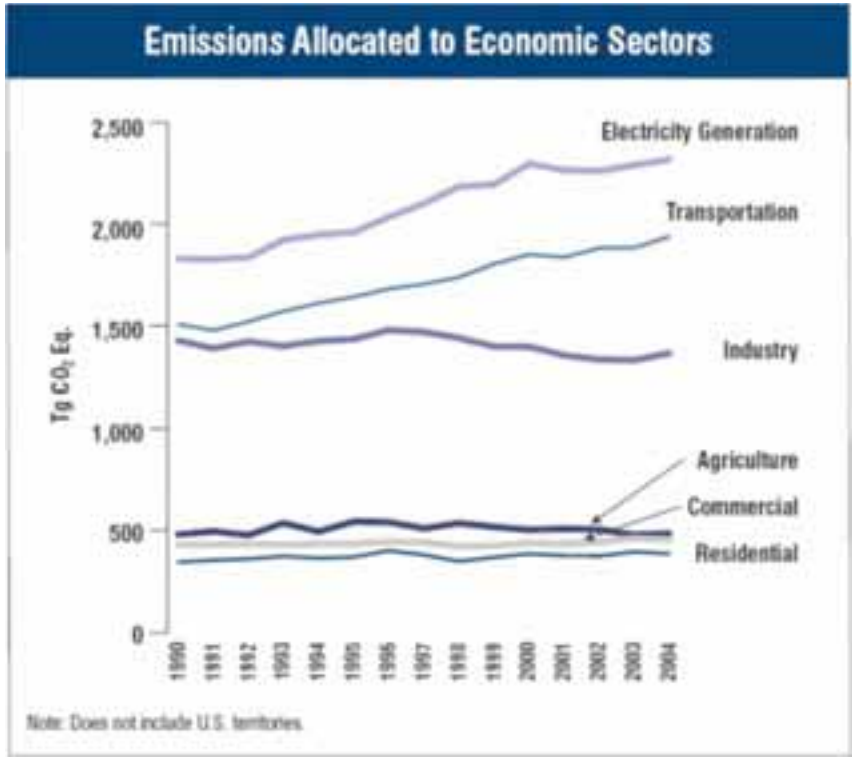


Contributions of Different Sectors

UK: from DTI

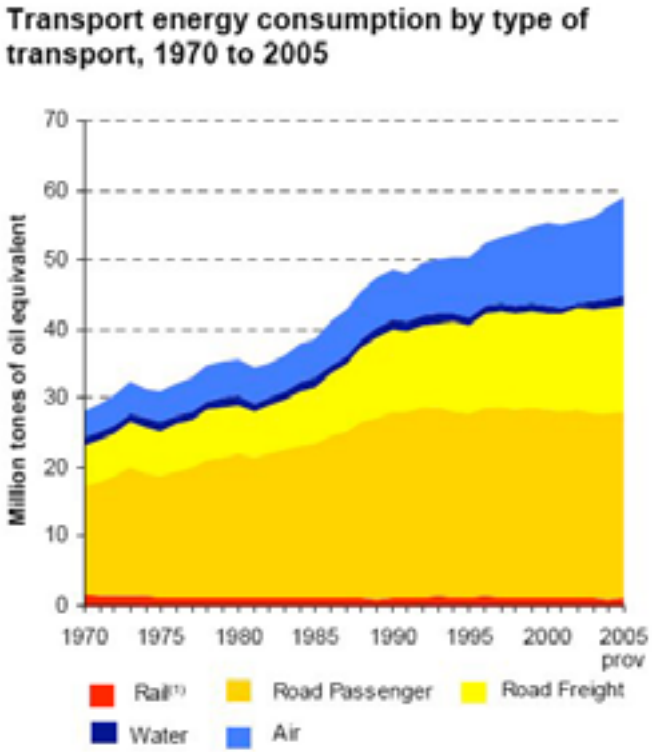
US: from EIA





Transport Modes

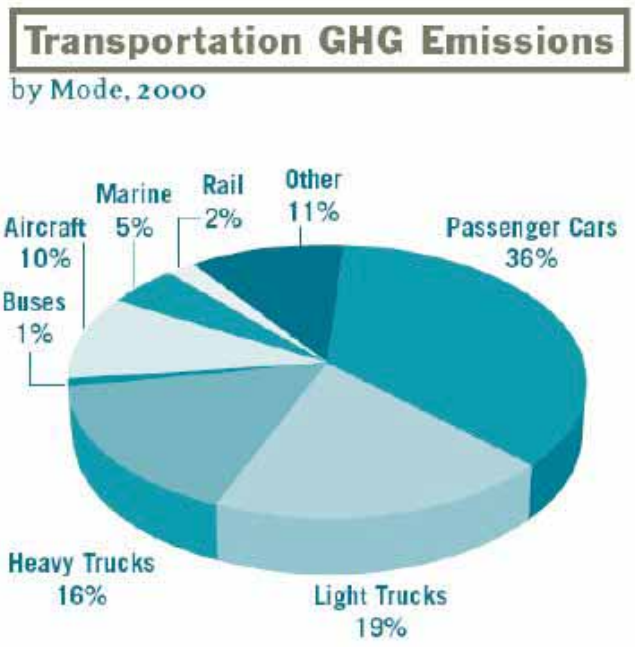
UK: Dept for Transport



(1) For rail transport, electricity consumed at transport premises is included from 1990 onwards.

Source: Department of Trade and Industry; Department for Transport

US: EPA

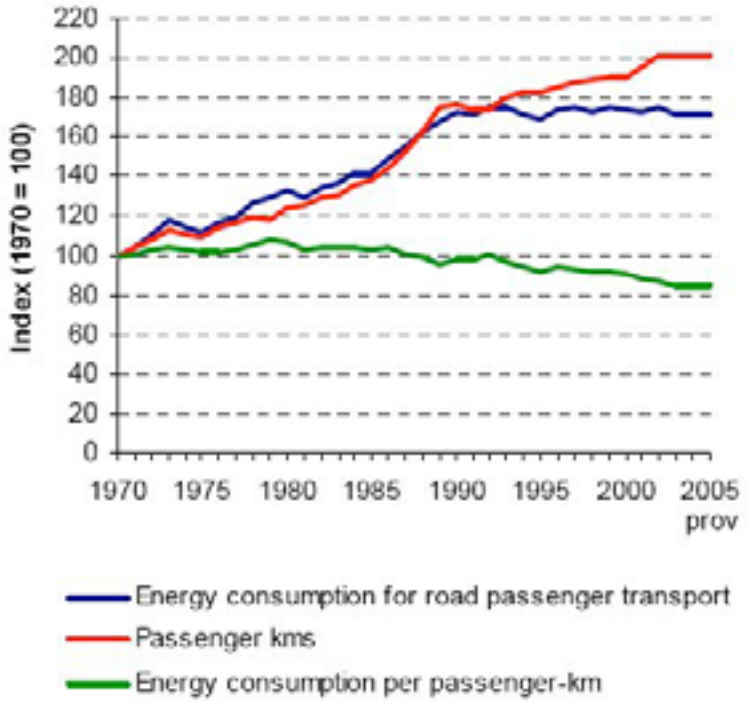


Source: U.S. EPA, 2002, Table 1-14.

Relationship to Land Use and Passenger Travel

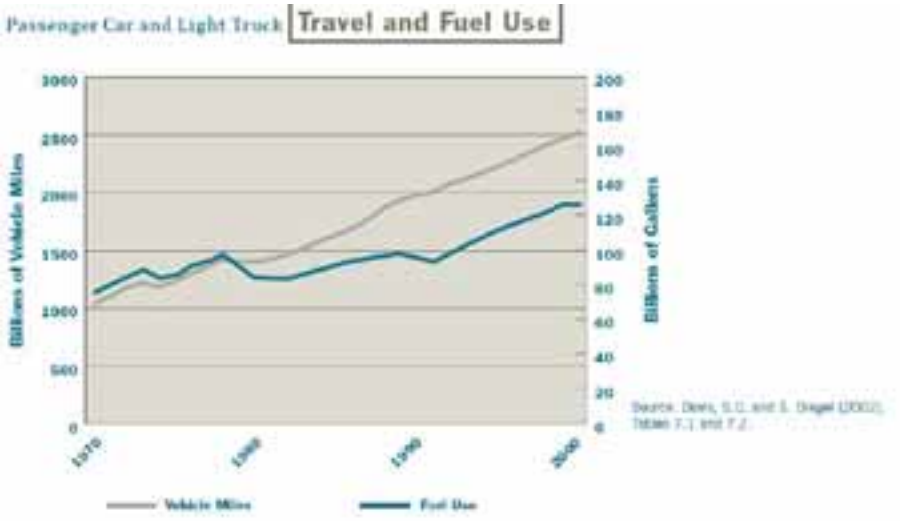
UK

Energy consumption and distance travelled by road passengers, 1970 to 2005



Source: Department of Trade and Industry; Department for Transport

US



Diffusion and Saturation of Motor Vehicles

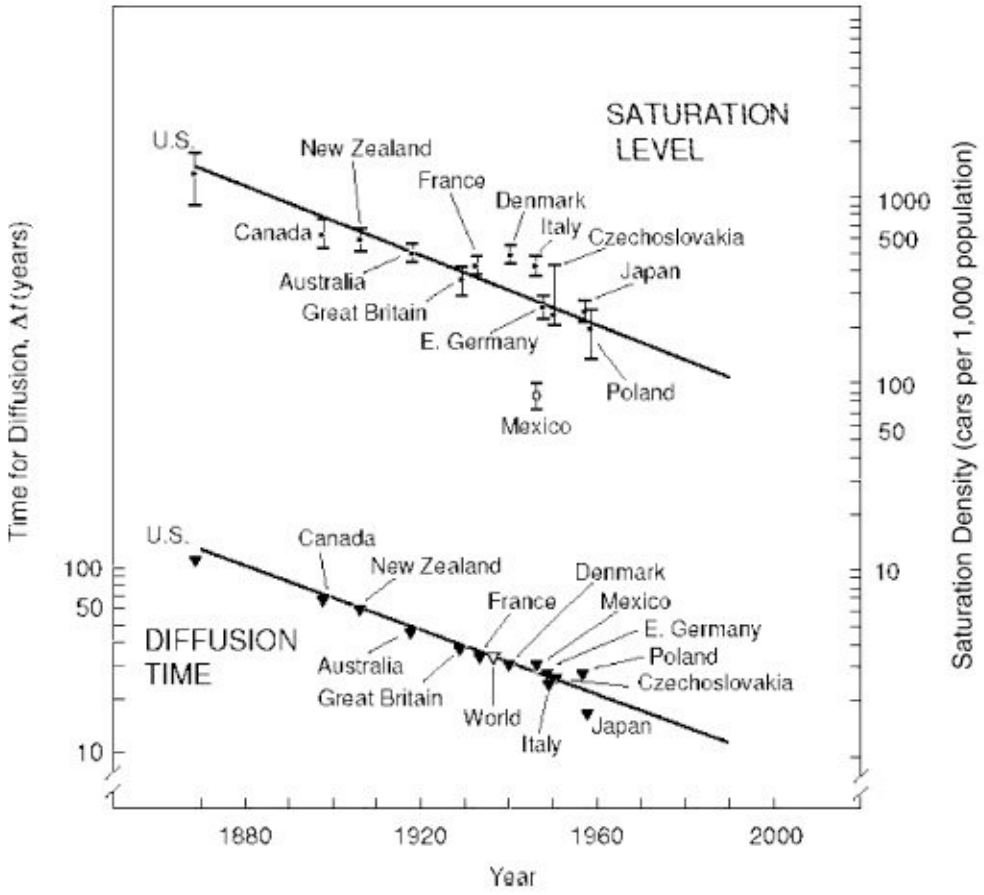
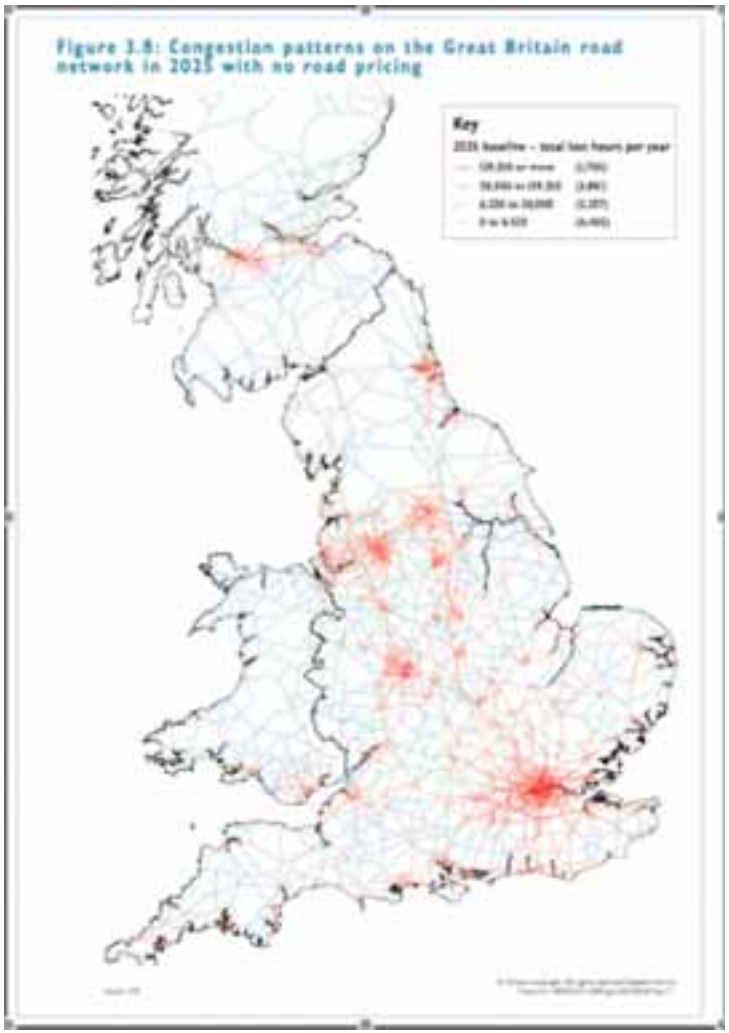


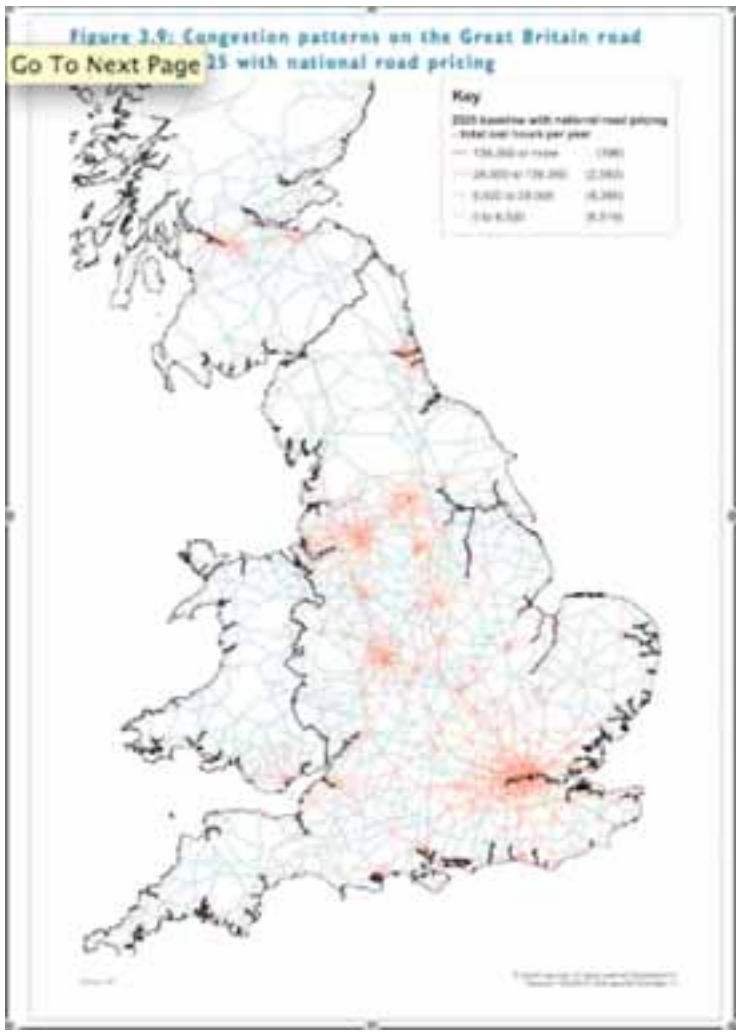
Fig. 5. Speed and level of passenger car diffusion in diverse countries. In Canada, for example, diffusion began in about 1900 and required about 60 years (lower part of chart) and reached about 500 cars per 1000 population (upper part of chart). *Source*: Gruebler [3].

Stern Review, November 2006

"Higher-density urban environments typically consume less energy for transport and in buildings. In addition, land use controls such as restrictions on the availability and pricing of parking spaces, the use of pedestrian zones and parks, and land use zonal strategies (including congestion charging), have the potential to support integrated public transport to reduce the use of private motor vehicles."

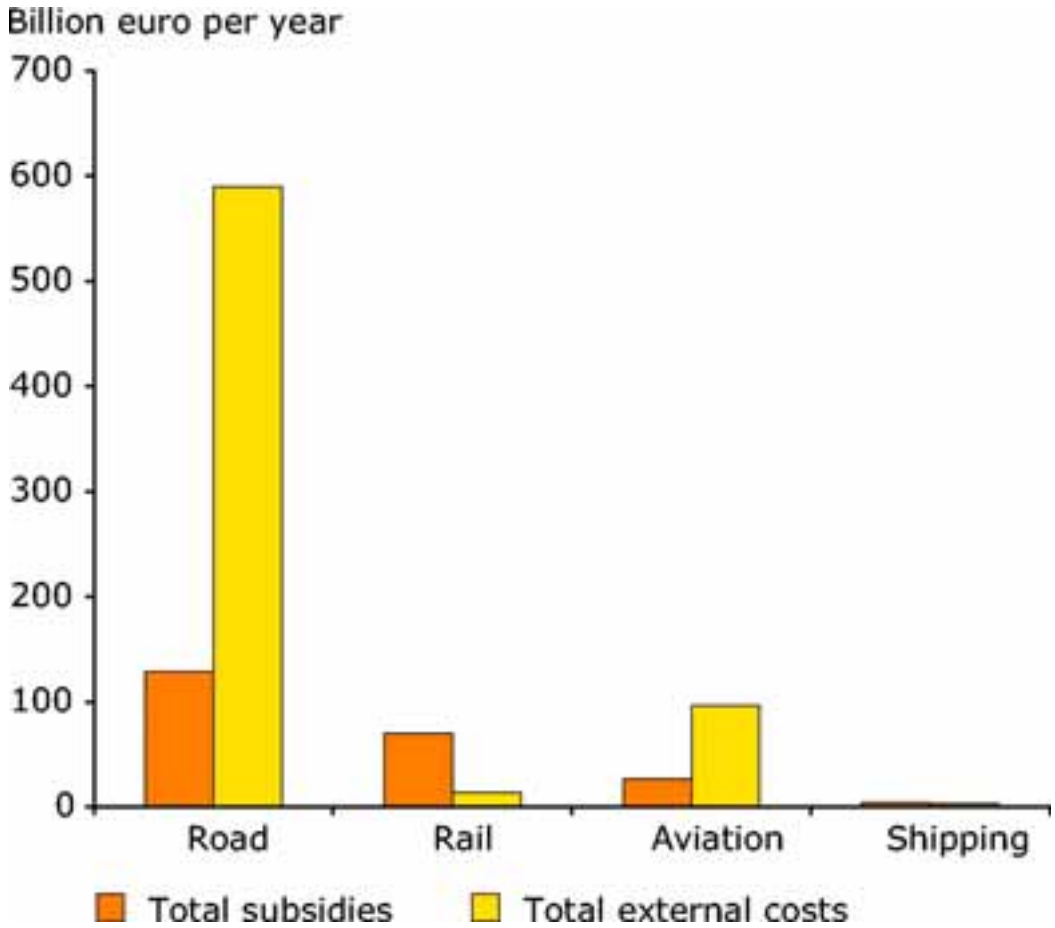
Congestion Charging: Is Relieving Congestion the Goal?





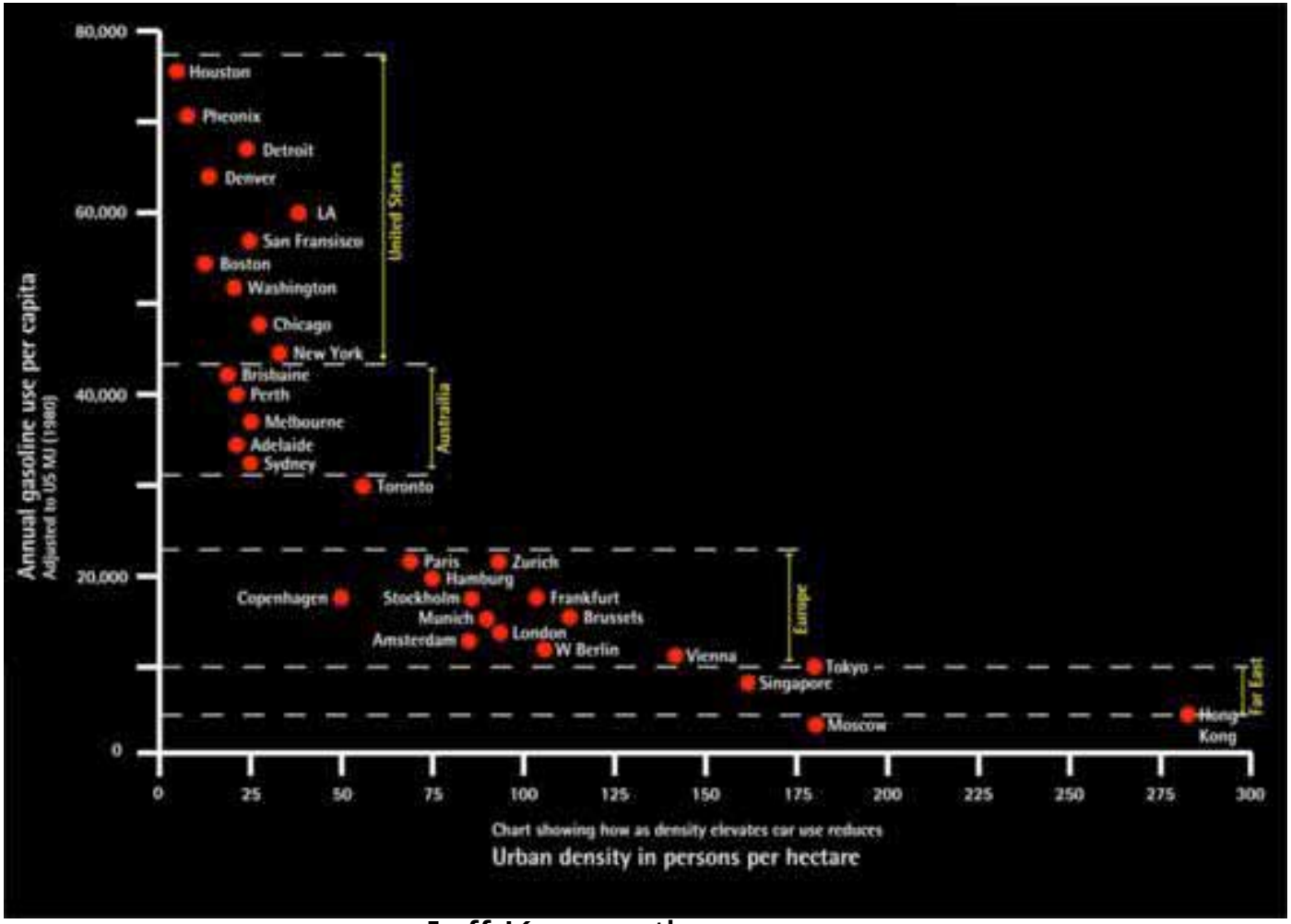
Eddington Report, 2007

Transport Subsidies and External Costs, EU



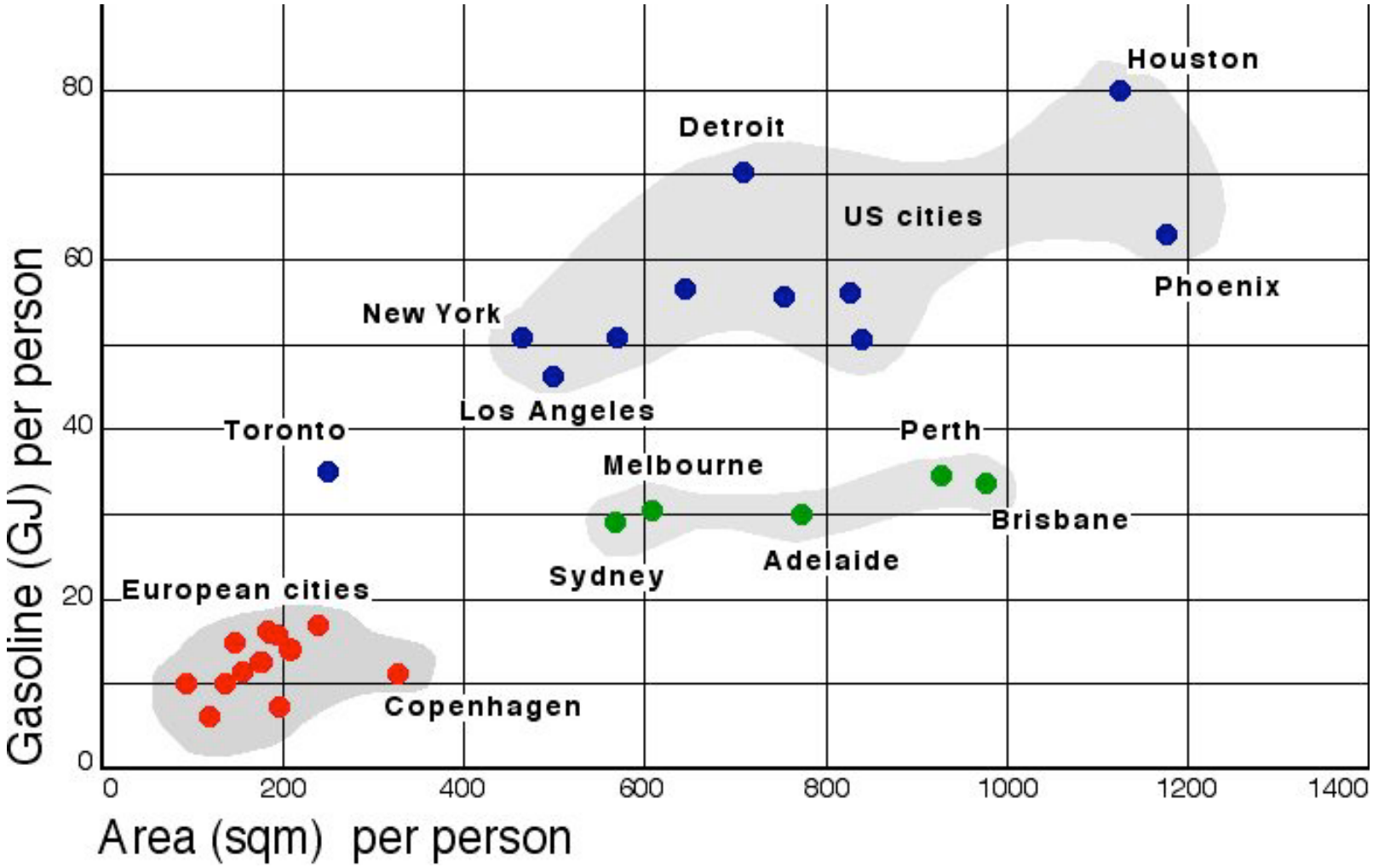
European Environment Agency, 2007

Petrol Use per Person



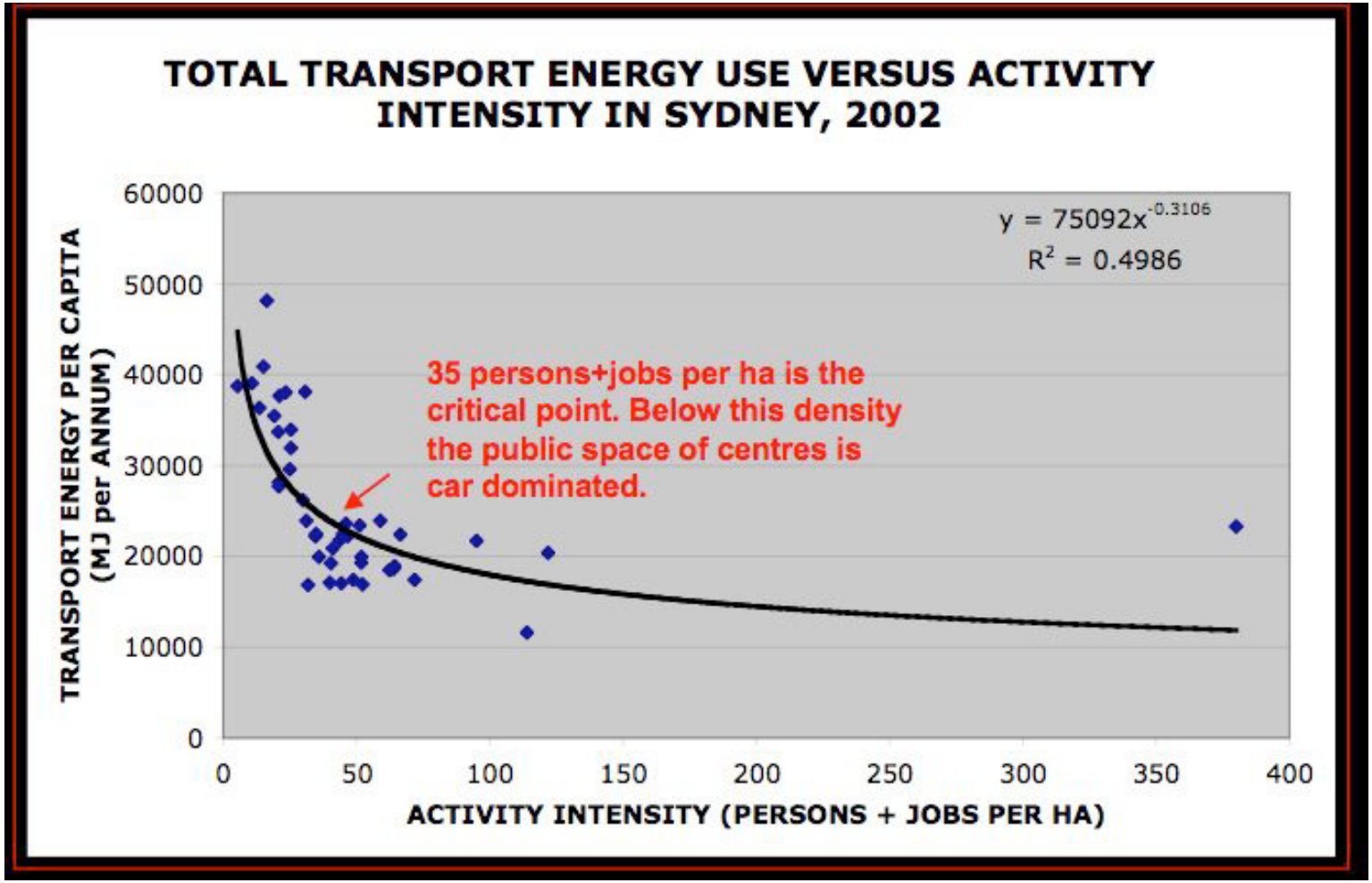
Jeff Kenworthy

Petrol Use and Density



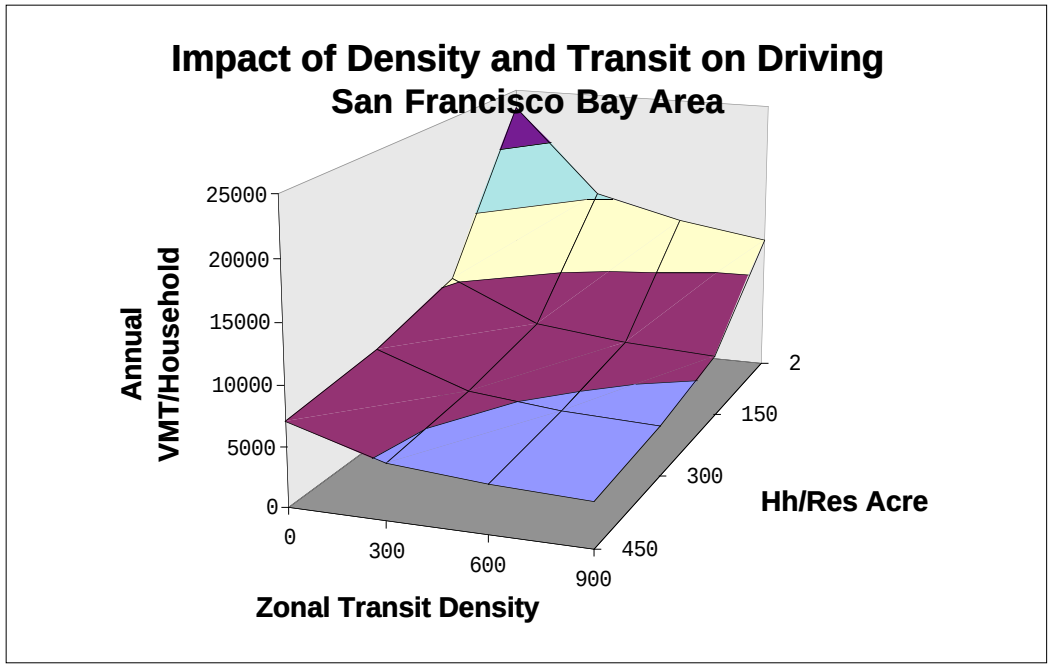
Adapted from Jeff Kenworthy

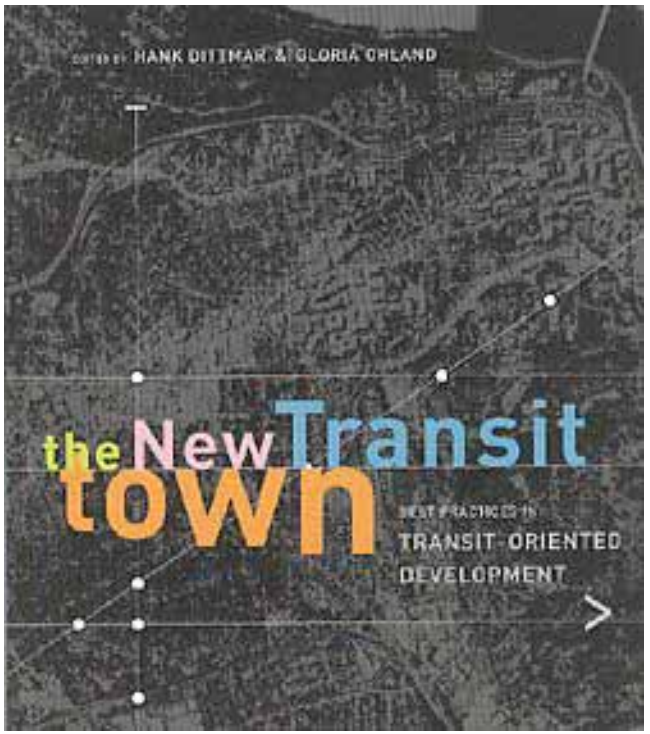
Energy Intensity and Activity



Jeff Kenworthy

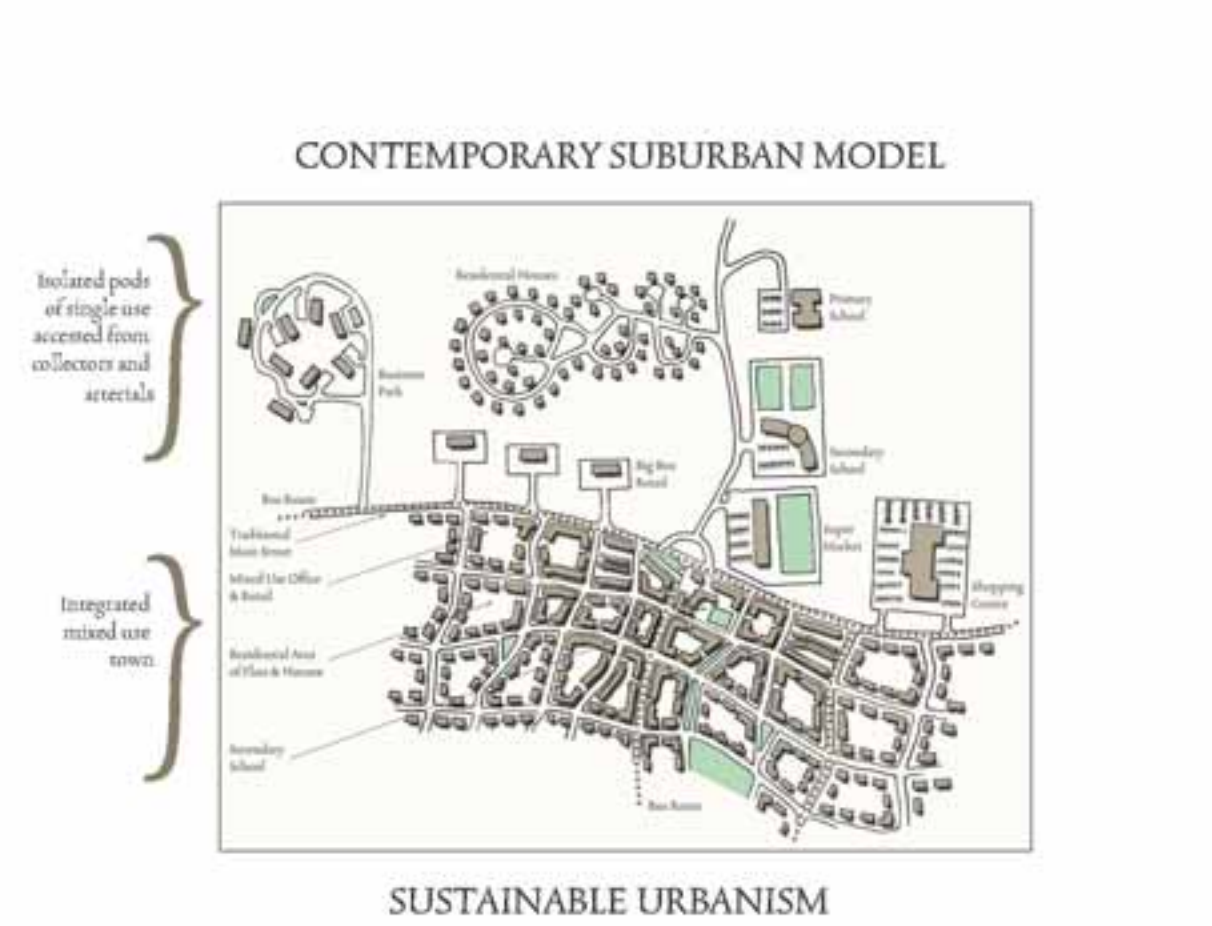
Location Efficiency





- Urban design factors including residential density, transport access and pedestrian friendliness are positively correlated with reductions in driving, even after controlling for household size and income.
- Holtzclaw, Clear, Dittmar, Transportation Planning and Technology, 2001. (www.reconnectingamerica.org); Dittmar, *New Transit Town*, 2005.

Principles of Traditional (and Sustainable) Urbanism



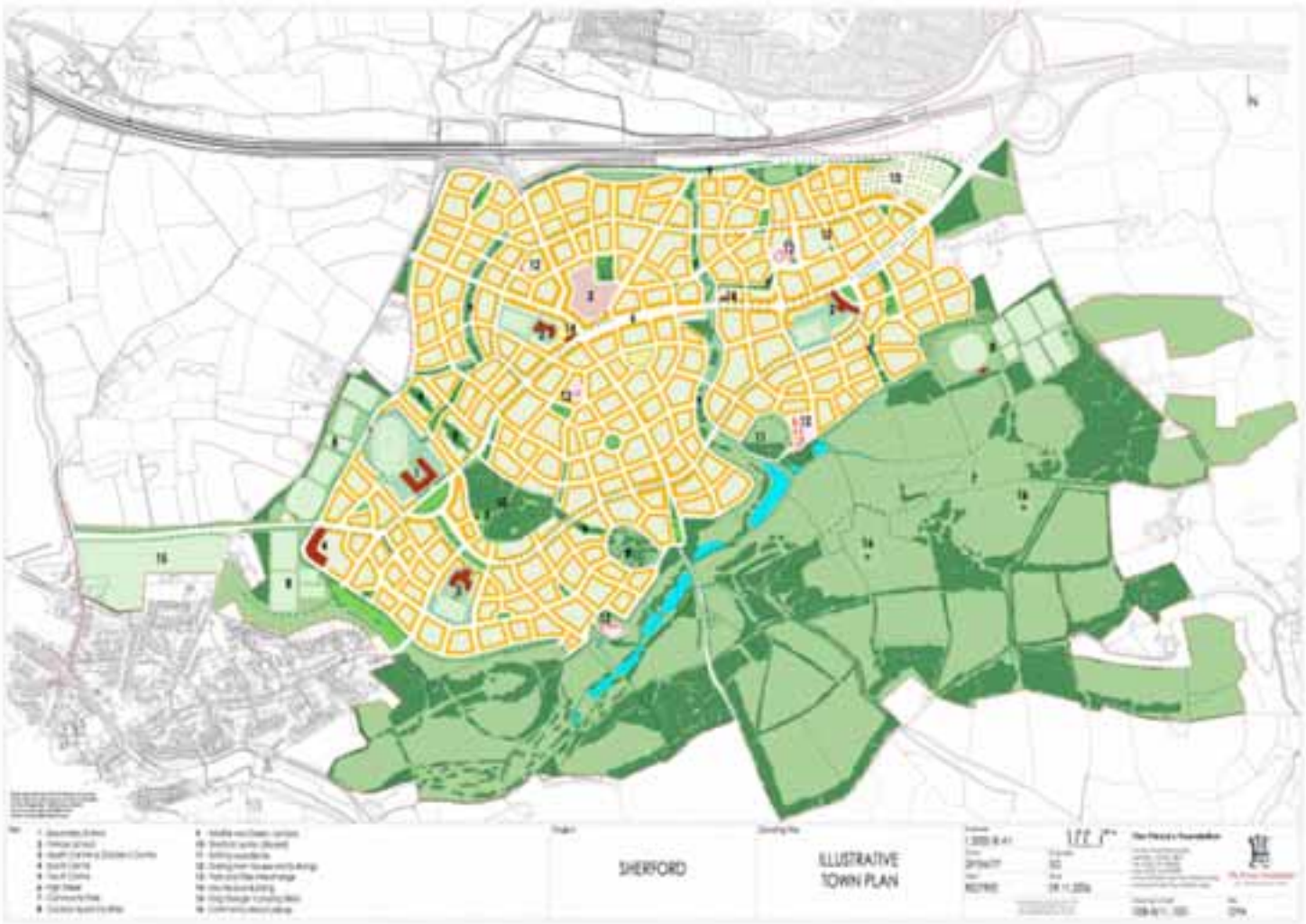
Exemplars: Evolving Tradition

- Sherford: a new sustainable community with a multifunctional High Street
- Upton: green streets and an urban network
- Walthamstow: the evolution of an outer London town centre into a public transport node and a place

Sherford Sustainable New Community

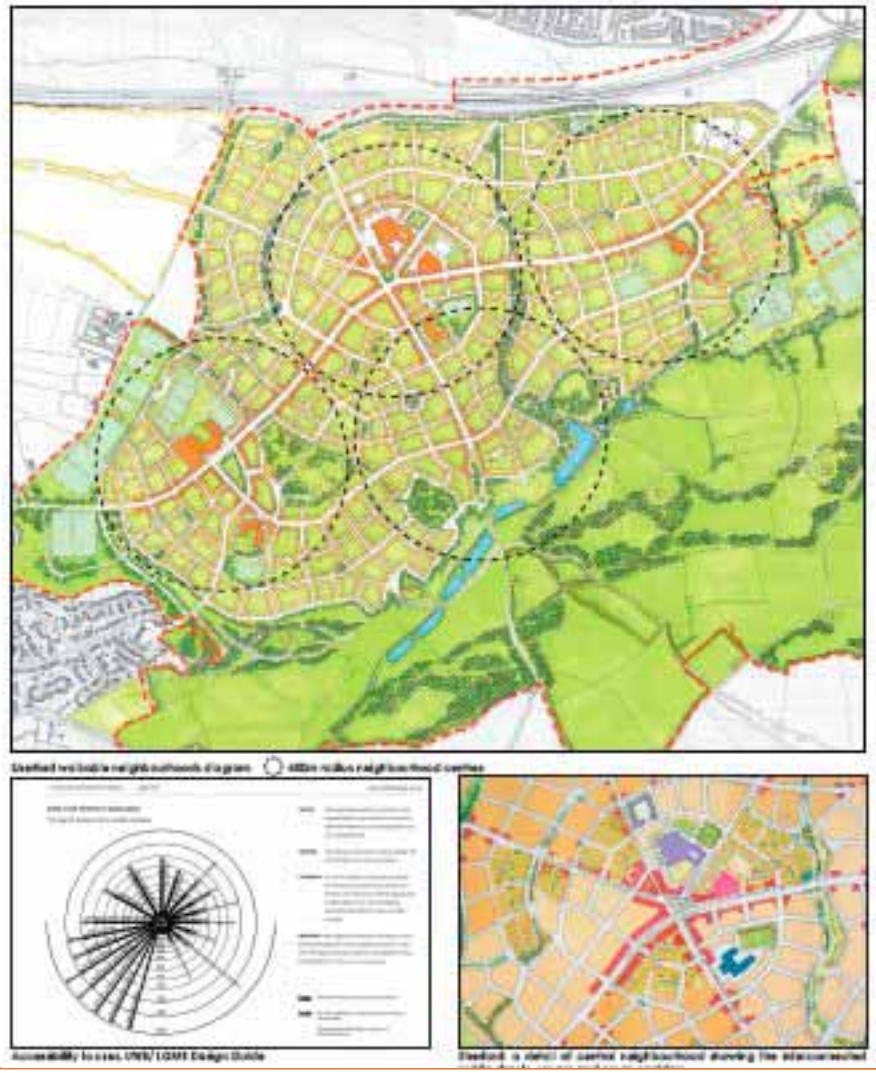
New community with 5500 homes, town centre with retail and employment, 50% affordable, rapid bus connection to centre, eco home excellent, 50% renewables green structure, local food and materials policy.

Sherford Master Plan

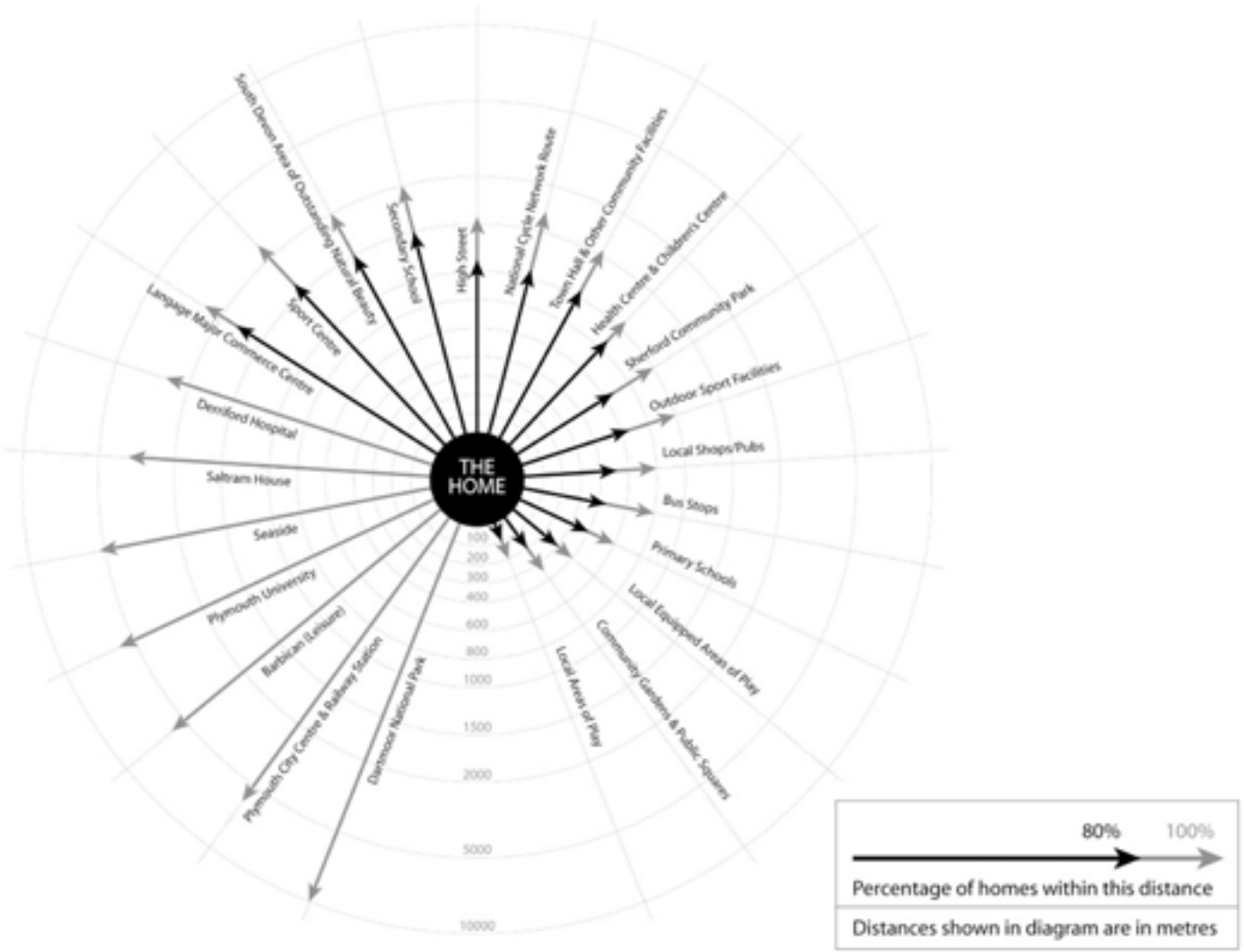


Developer: Redtree, Masterplanning & Code: Prince's Foundation with Paul Murrain, Transport: Andy Cameron, WSP: Martin Lonsdale

Neighbourhood Structure for Sherford

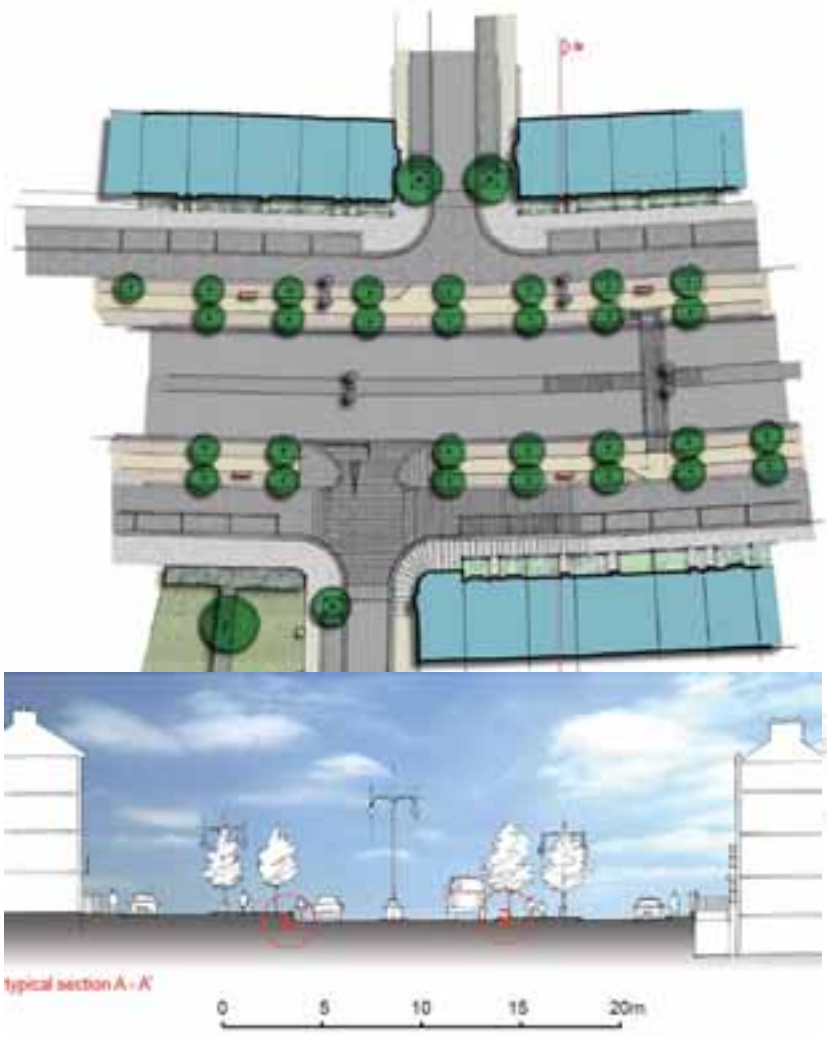


Sherford: From Home to Everything You Need

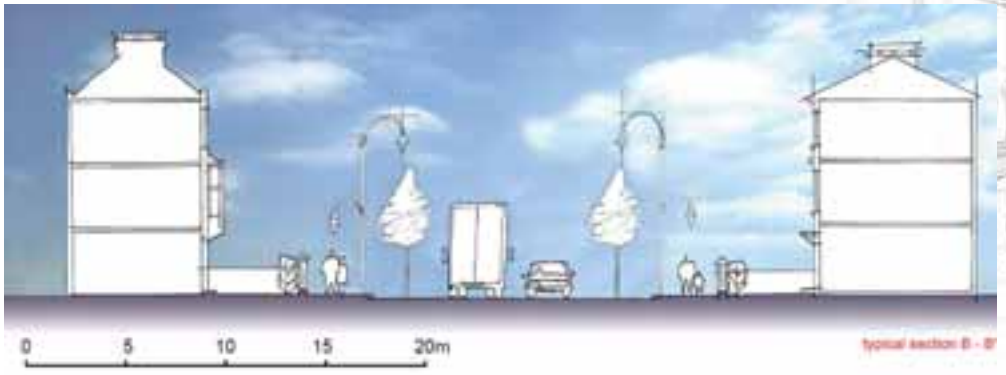


Sherford Town Code

A New High Street for Sherford

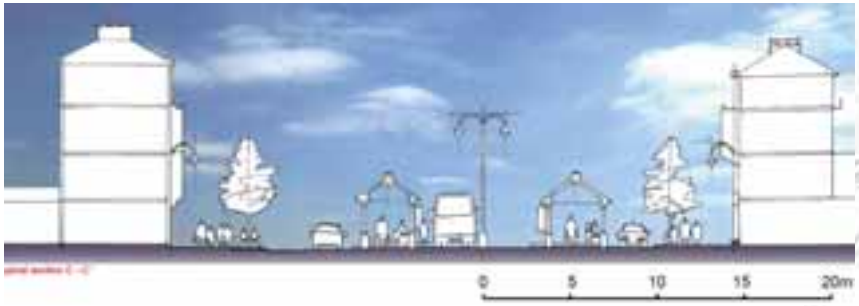


A New High Street for Sherford (2)



high street: view looking east

A New High Street for Sherford (3)



high street: view looking south

Sherford Sustainability Review by BRE

Performance summary

Development: Sherford, South Hams

Date: 23rd November 2006

	Sections	Number of Credits Achieved				Maximum possible score	Actual score achieved	%
		Best	Good	Minimum	Not Met			
1	CLIMATE CHANGE AND ENERGY	10	4	1	1	14.05	11.53	82%
2	SUSTAINABLE CONSTRUCTION	5	5	4	0	11.3	7.93	70%
3	COMMUNITY & SUSTAINABLE LIFESTYLES	5	1	0	1	6.4	5.10	80%
4	PLACEMAKING	6	7	2	0	13.2	10.12	77%
5	TRANSPORT	10	2	1	0	11.35	10.29	91%
6	ECOLOGY	6	1	0	0	5.65	5.44	96%
7	BUSINESS	1	1	2	0	3.85	2.26	59%
TOTAL SCORE		43	21	10	2	65.80	52.66	80%

Overall Performance Rating: **Excellent**

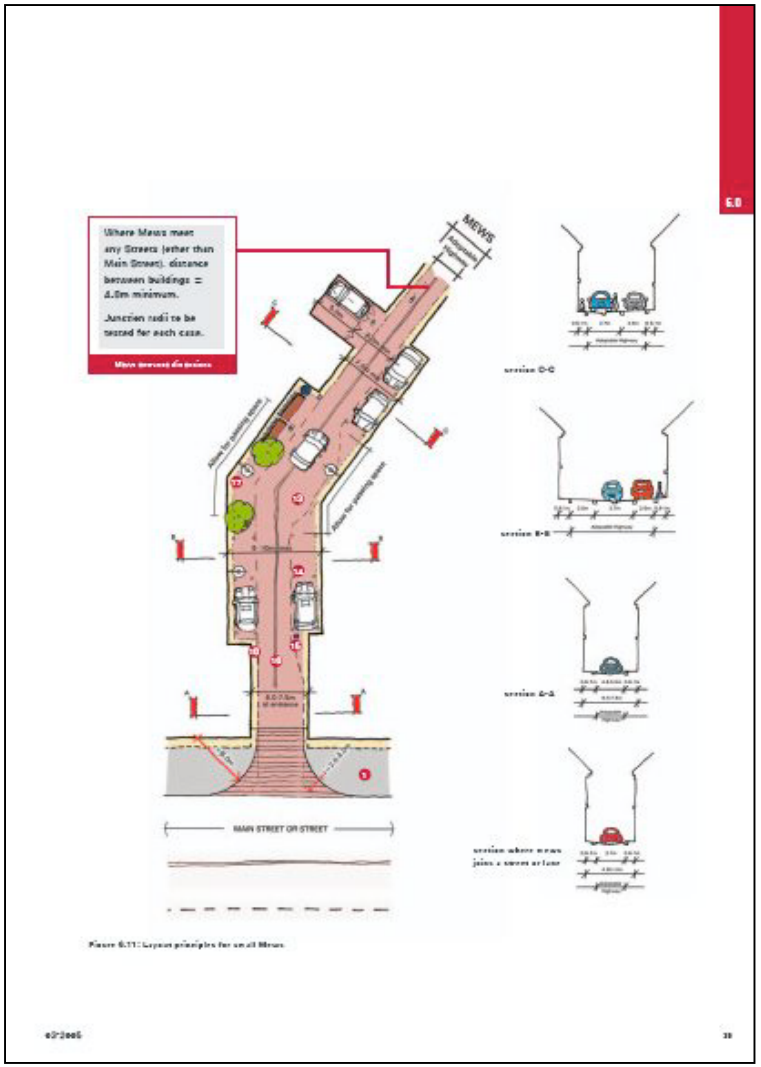
Table 1: Sherford Performance summary Table

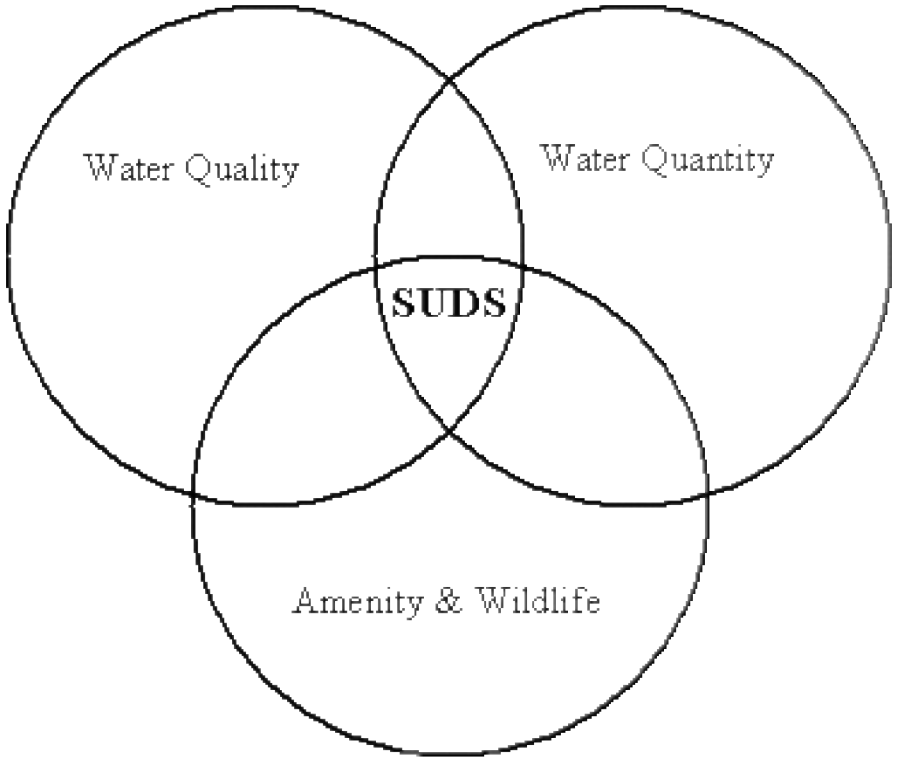
Upton in Northampton

- 1000 home mixed use extension to Northampton, with English Partnerships, incorporating sustainability, mixed income housing and design codes. Integrates street network and sustainable drainage.
- The Prince's Foundation developed original master plan through an Enquiry by Design, and has remained on project board through delivery.

Before and After

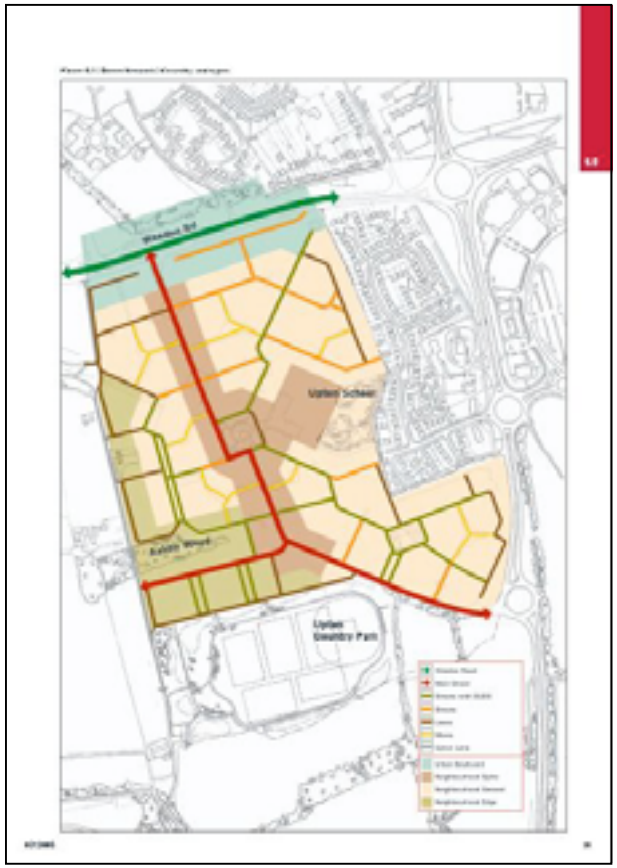
Upton Design Code: English Partnerships, The Prince's Foundation, EDAW





Where is Placemaking?

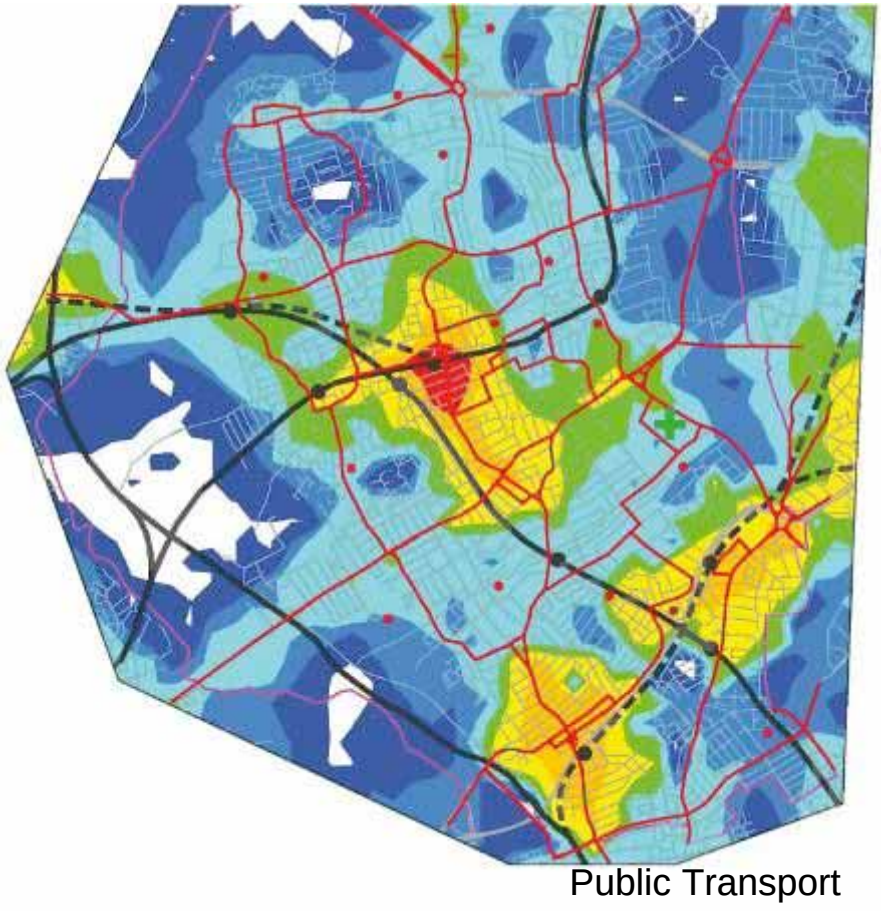
Sustainable Urban Drainage System at Upton, Northampton
English Partnerships, Prince's Foundation, EDAW



Sustainable Urban Drainage at Upton, Northampton

Walthamstow

Accessibility



Public Transport Access

Space Syntax

Precedent Analysis

50,000 people use Walthamstow Central Station each day

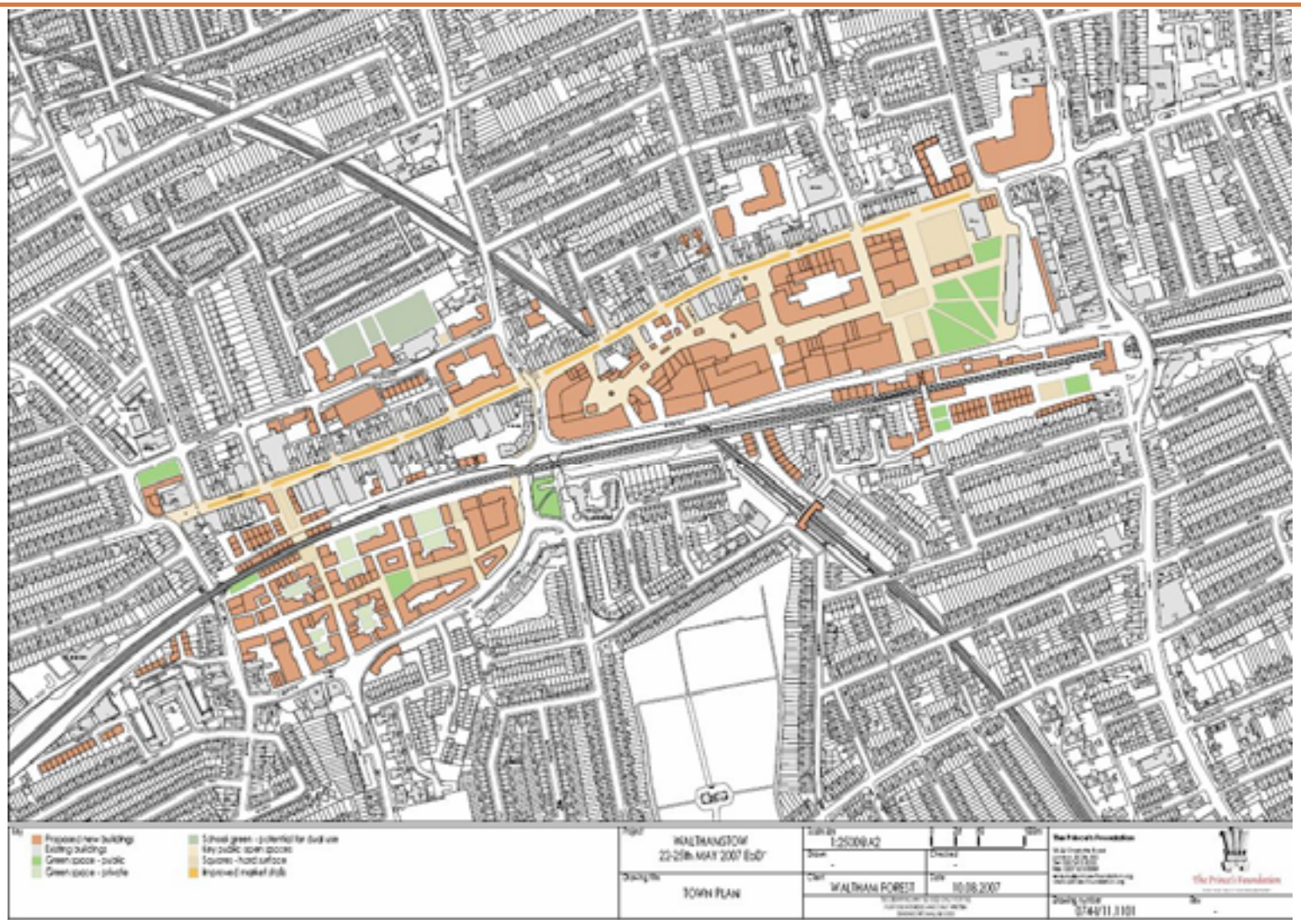
400m radius:

Swiss Cottage	4,000 dwellings
South Kensington	2,500 dwellings
Walthamstow	1,500 dwellings

High density, high quality living - terraced houses, London

Providing choice - live/work units within a mews street, London

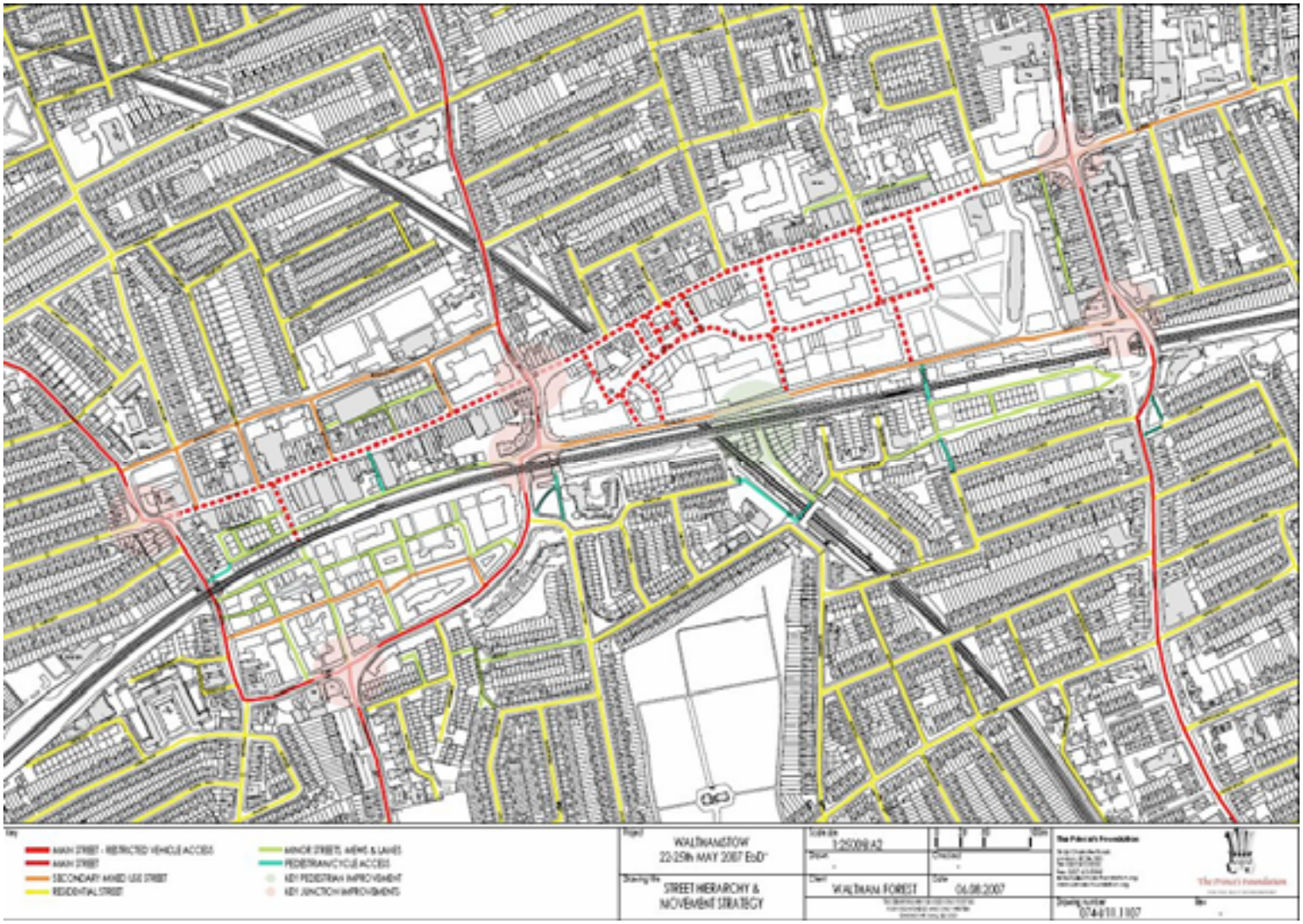
Master Plan


WALTHAMSTOW
22-25th MAY 2007 BsD'
TOWN PLAN
1:2500@A2
WALTHAM FOREST
10.06.2007

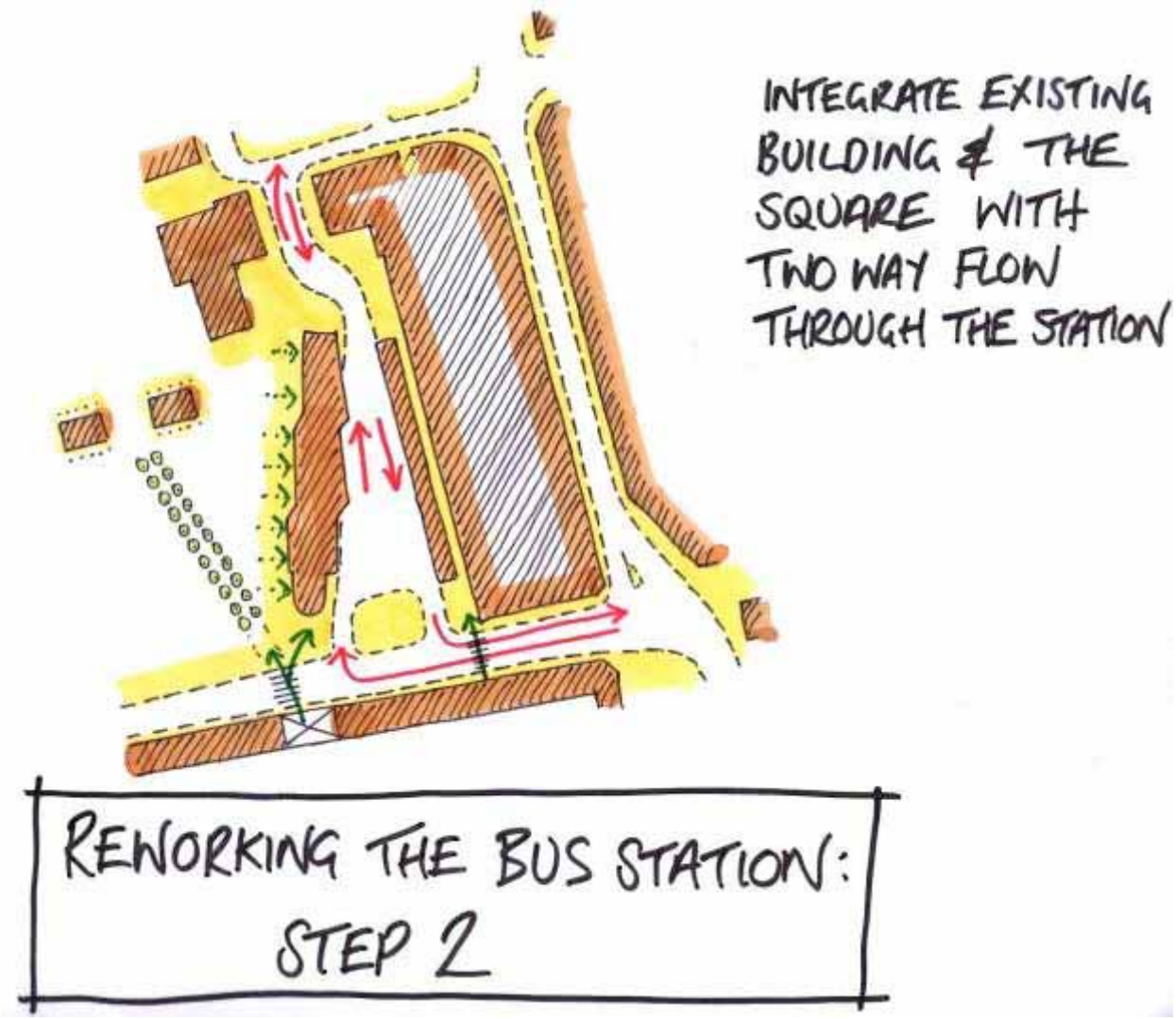
Massing


1-2 STOREYS
3-4 STOREYS
5-7 STOREYS
WALTHAMSTOW
22-25th MAY 2007 EoD
MASSING
WALTHAM FOREST
08.06.2007
074-010.1105

Movement


WALTHAMSTOW
22-25th MAY 2007 EoD
STREET HIERARCHY &
MOVEMENT STRATEGY
WALTHAM FOREST
06.08.2007

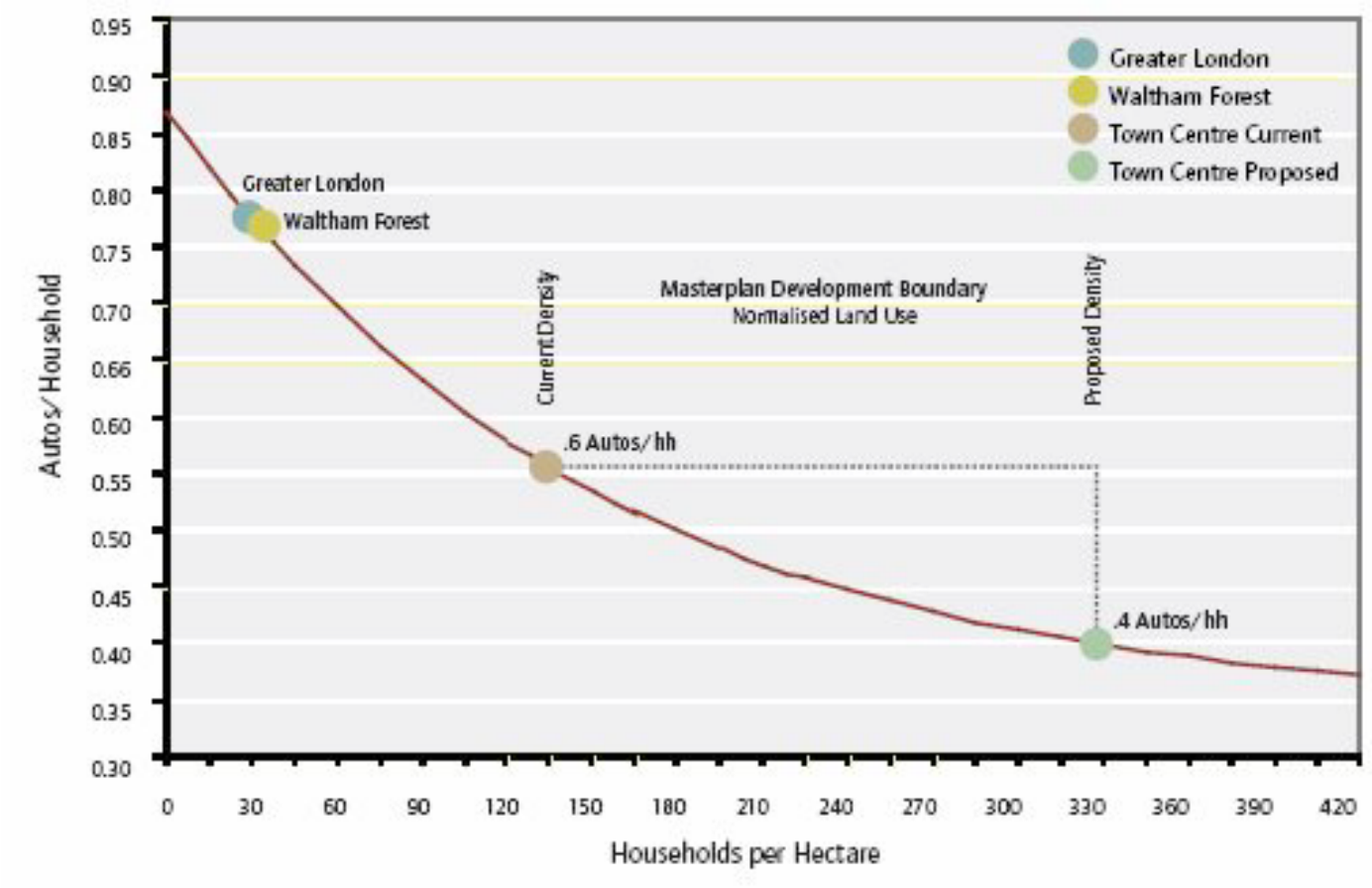
Bus Station



Alan Baxter Assoc.

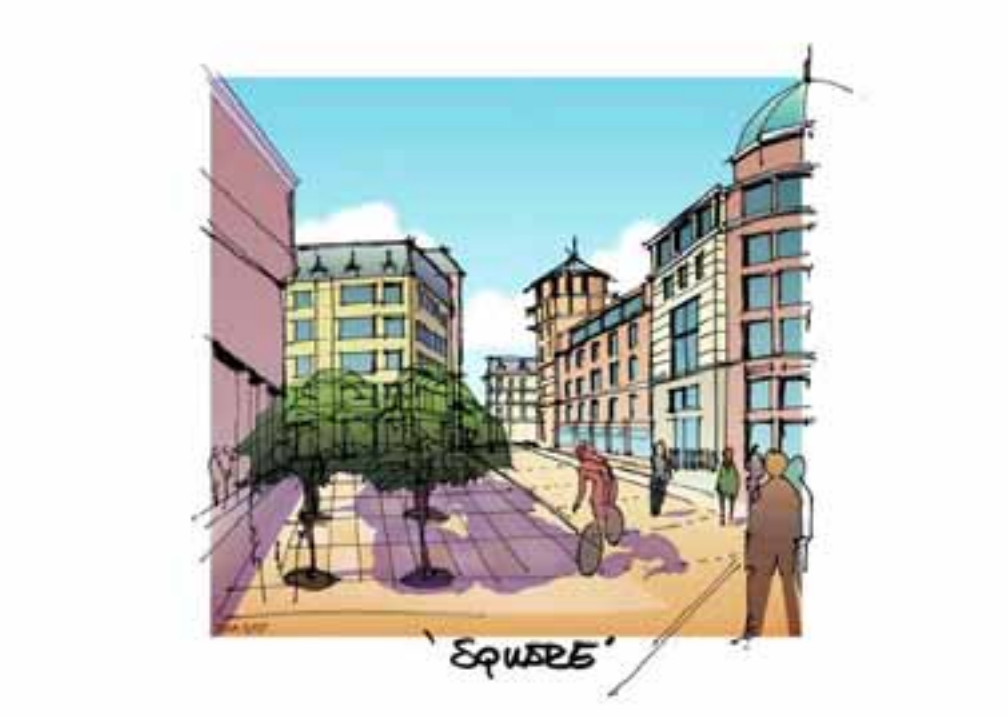
Location Efficiency

Auto ownership per household



CNT,2007

A Shopping Centre Reborn



Seth Harry


WATCH
FOR
TRAMS