Integration of Transport Modes

Ian Williams

Cambridge University

Transport in the Cambridge sub-region

Centre for Mathematical Sciences, Cambridge University

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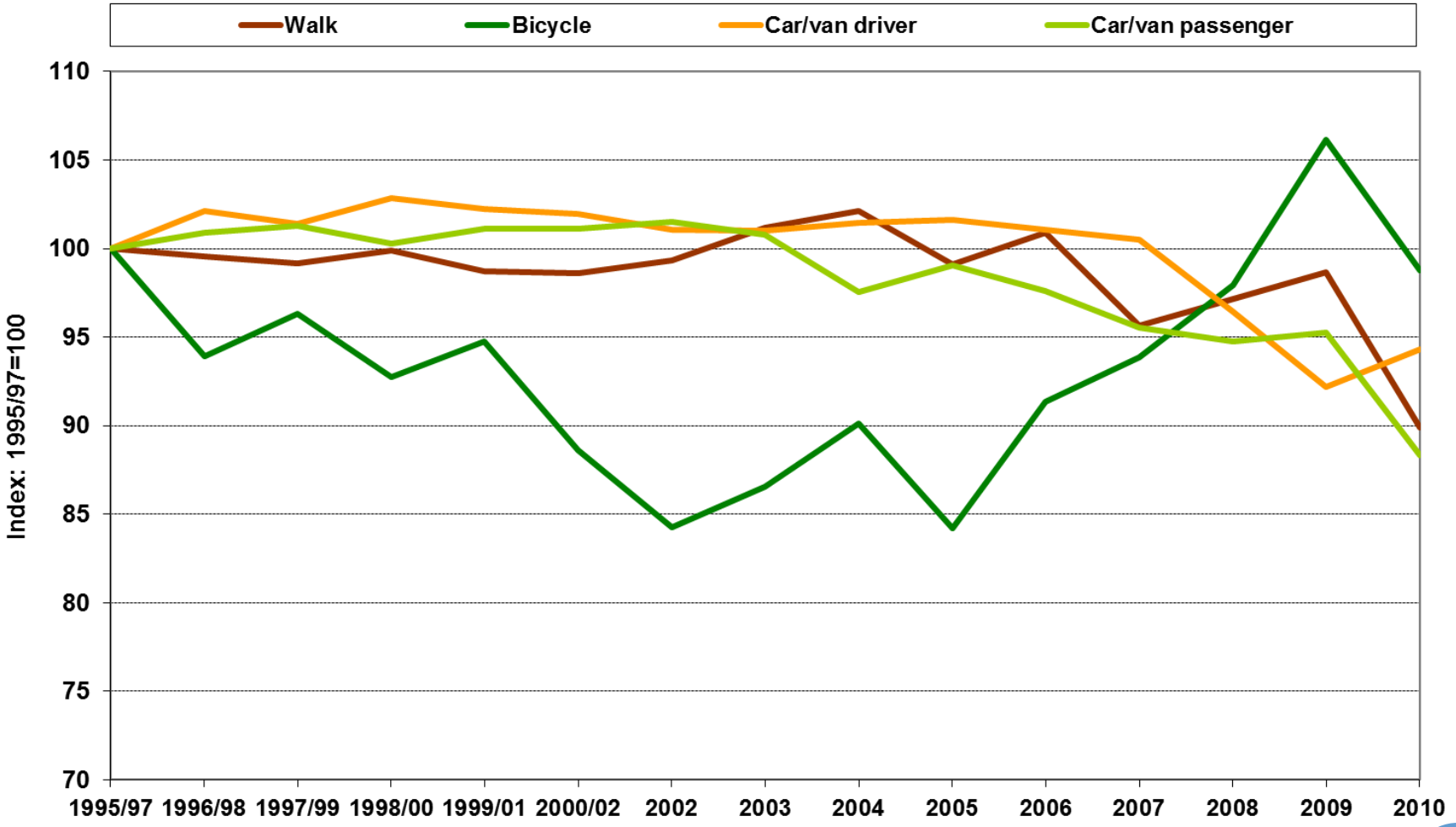
Summary

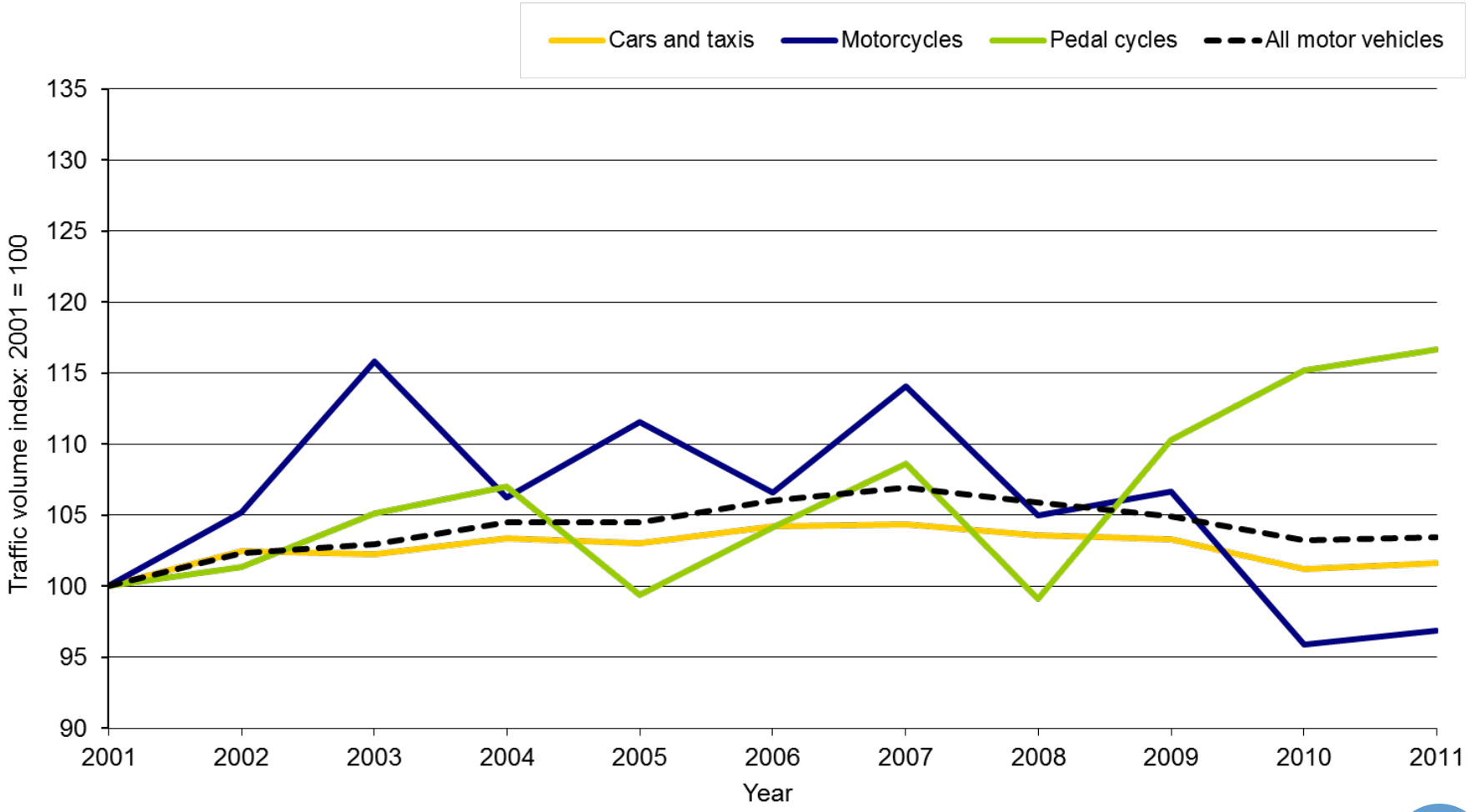
- Quantifying the use of active modes - GB
- Quantifying the use of active modes - Cambridgeshire
- Understanding their patterns and trends

Quantifying the use of active modes – Great Britain

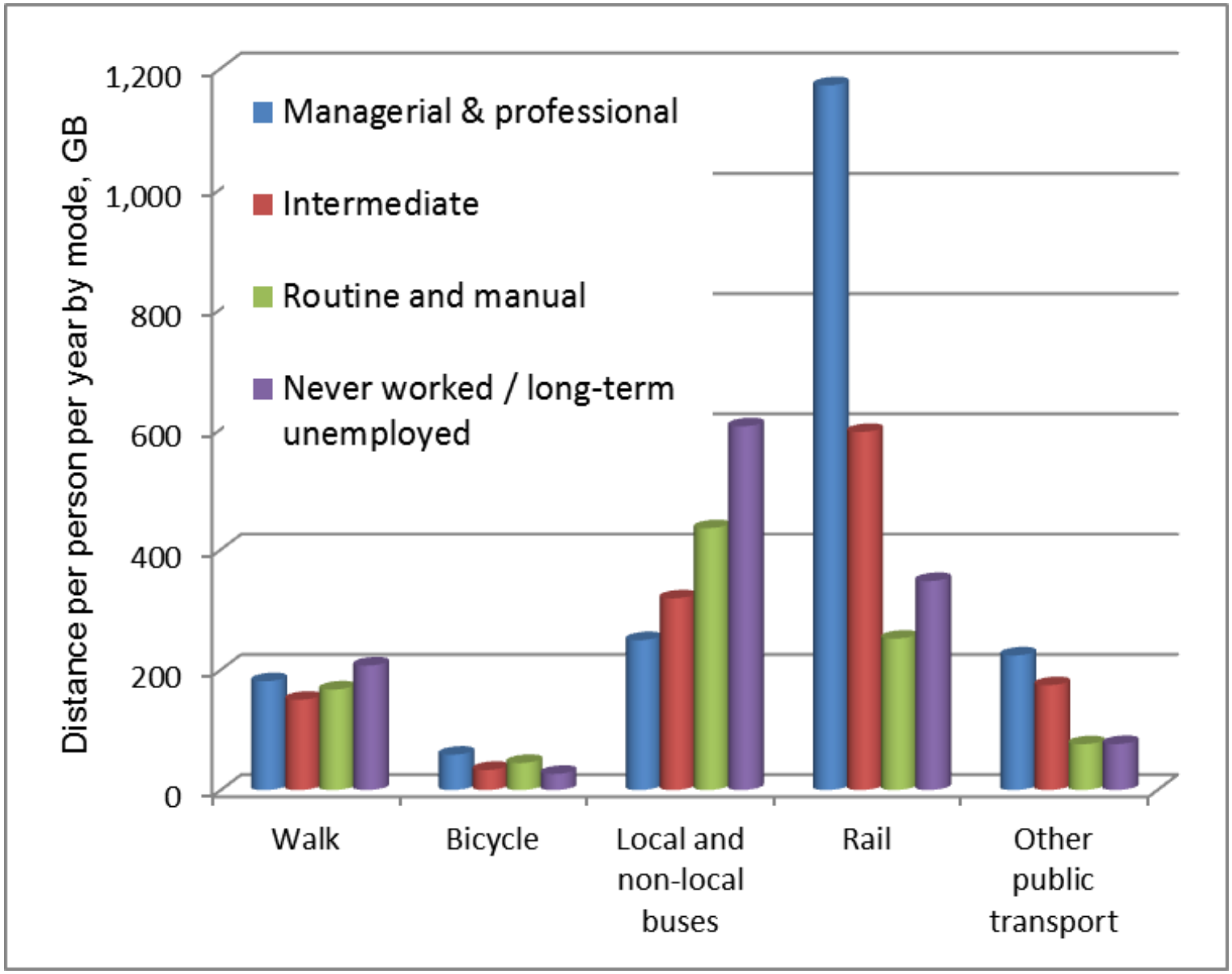
AVERAGE DISTANCE TRAVELLED BY PRIVATE MODES: GB 1995-2010



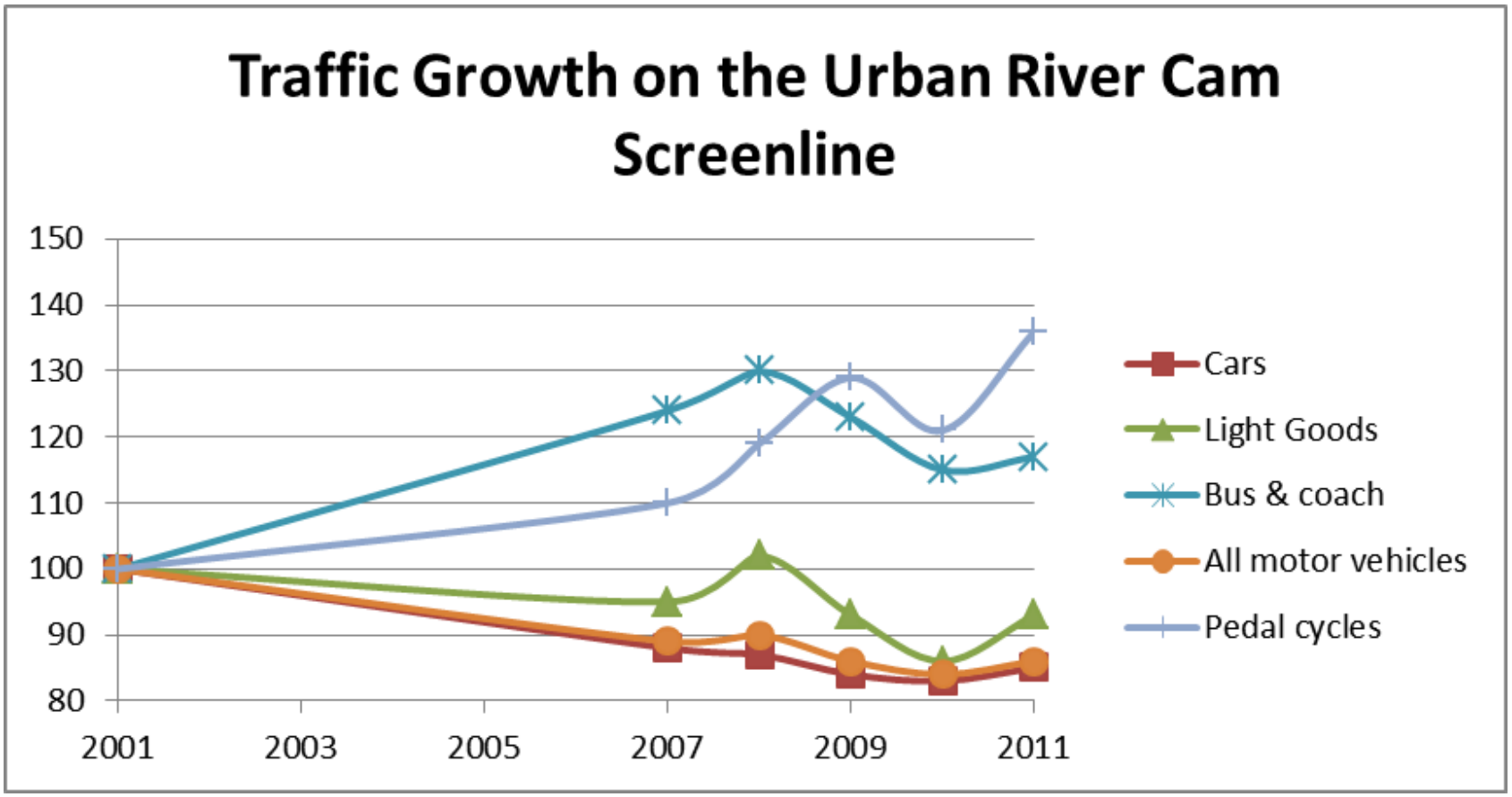
ROAD TRAFFIC KMS TREND BY MODE IN GB : 2001 - 2011

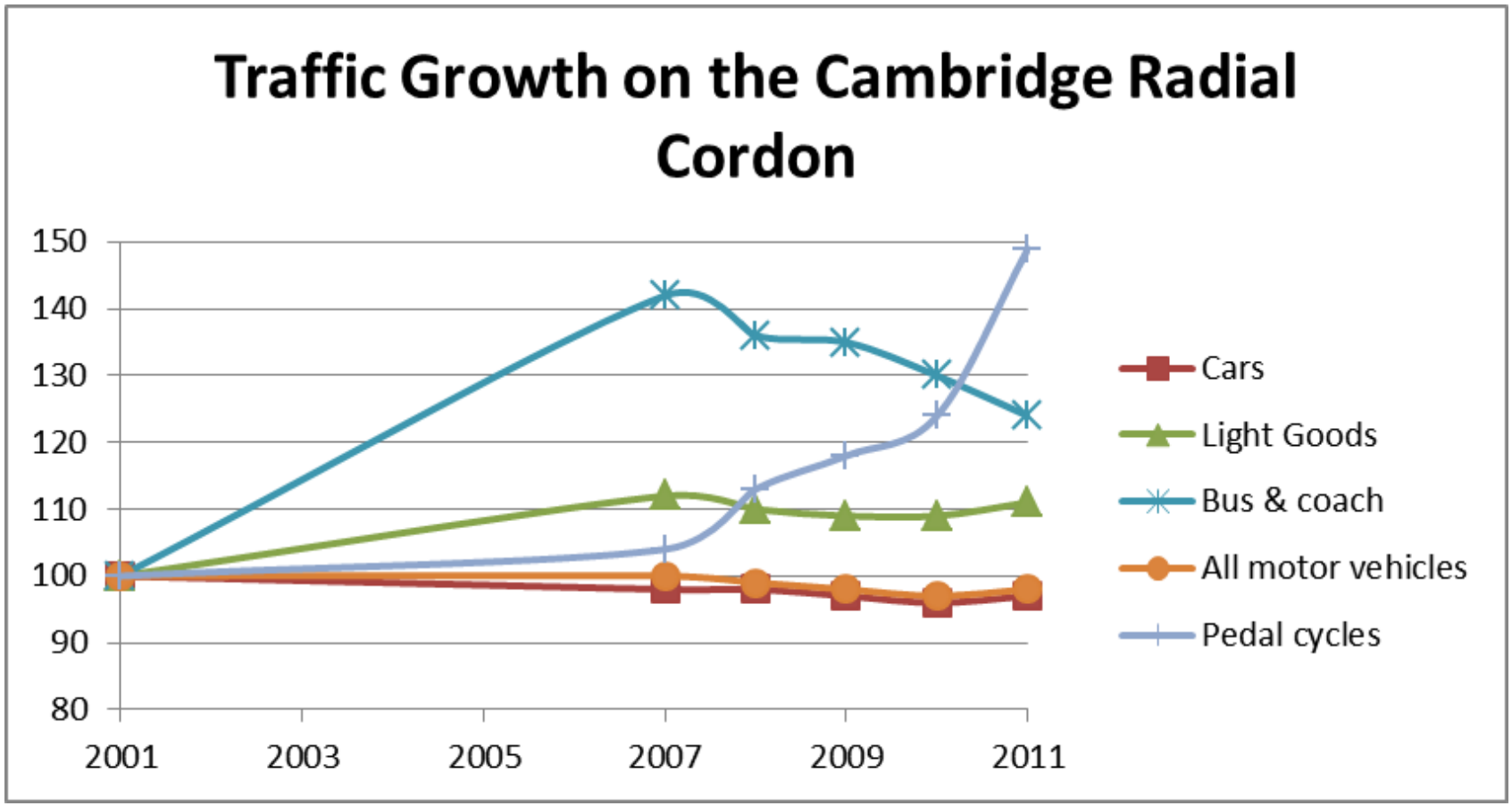


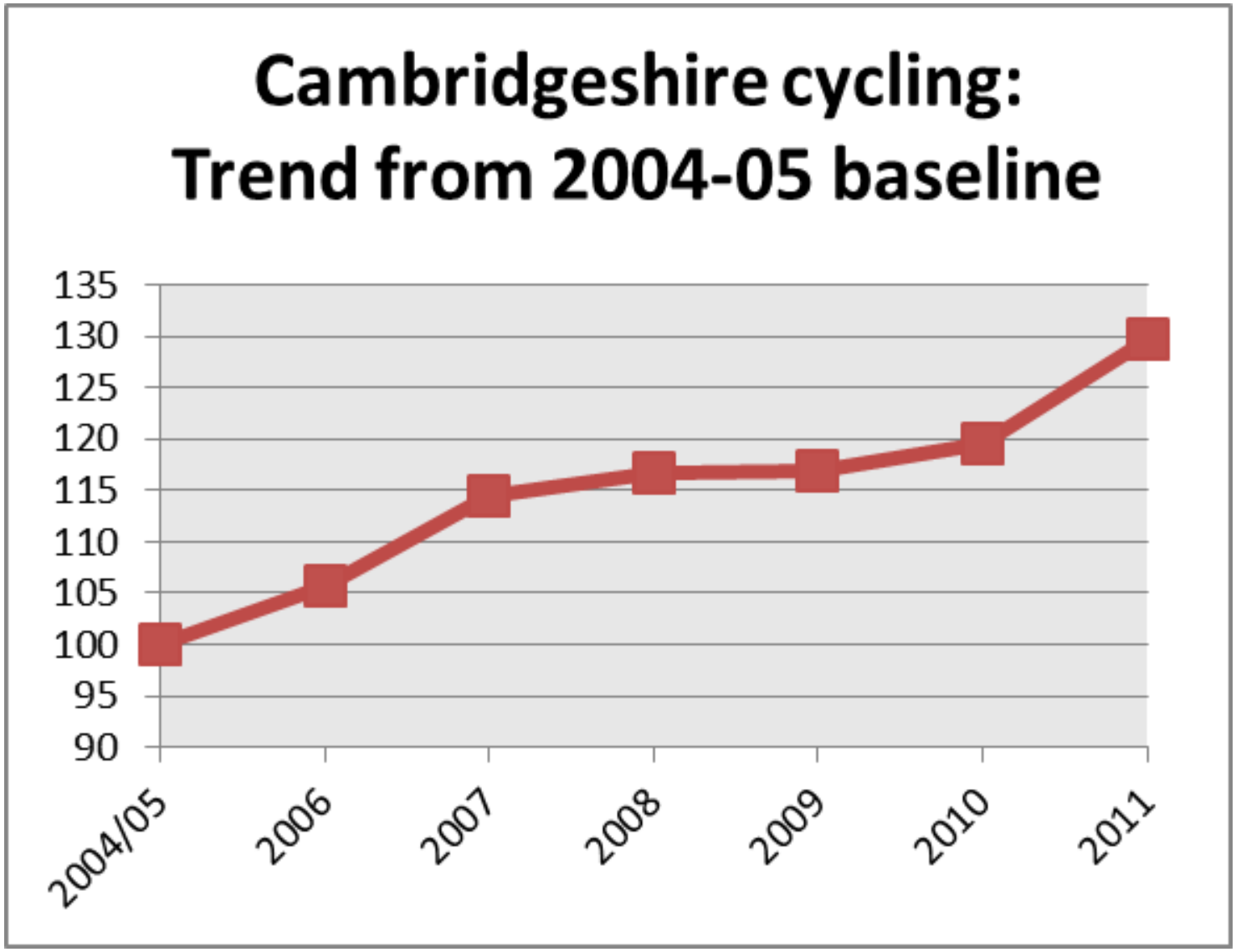
Distance by mode by NS-SeC, 2010, GB



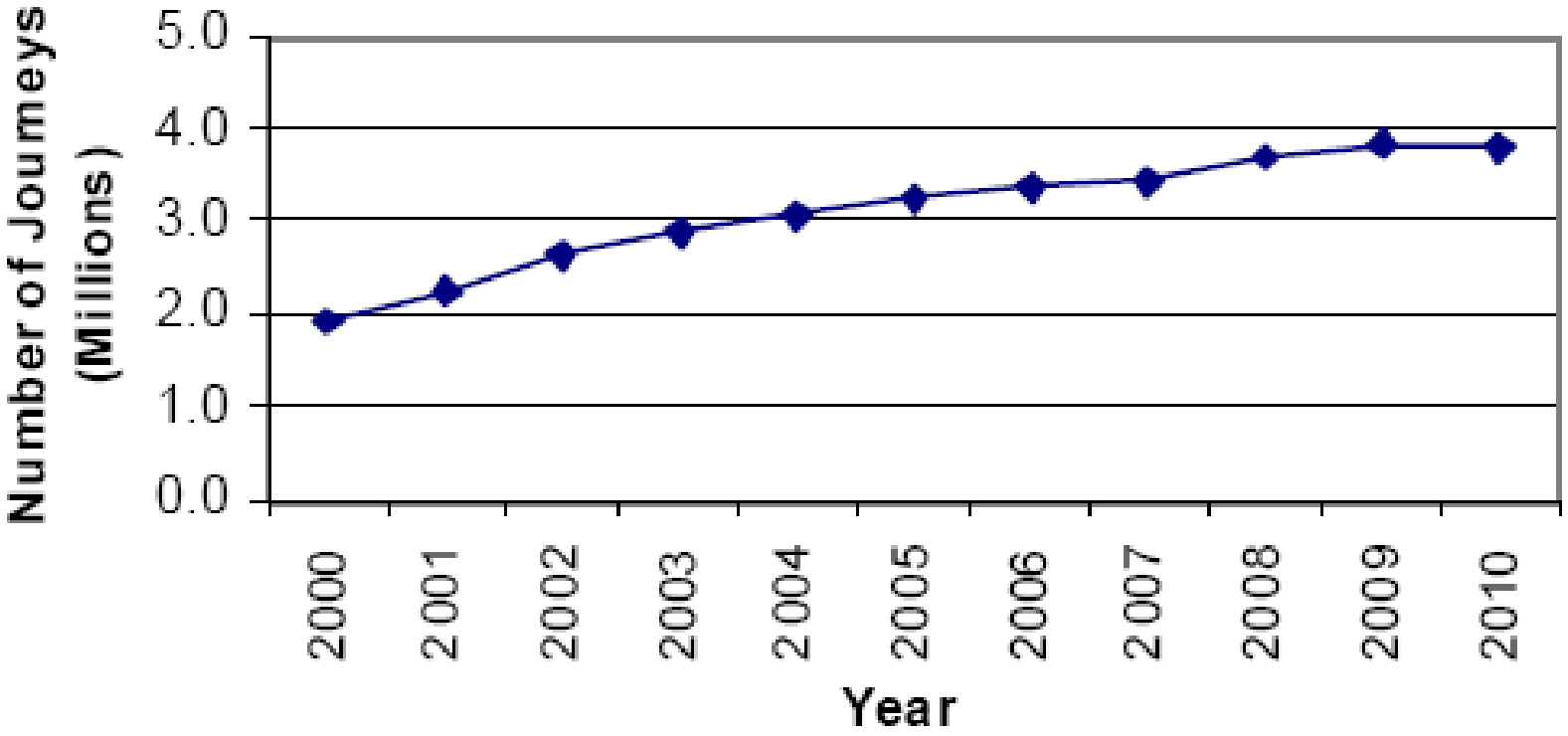
Quantifying the use of active modes – Cambridgeshire


Traffic Growth on the Urban River Cam Screenline
150
140
130
120
110
100
90
80
2001
2003
2005
2007
2009
2011
Cars
Light Goods
Bus & coach
All motor vehicles
Pedal cycles


Traffic Growth on the Cambridge Radial Cordon
150
140
130
120
110
100
90
80
2001
2003
2005
2007
2009
2011
Cars
Light Goods
Bus & coach
All motor vehicles
Pedal cycles


Cambridgeshire cycling:
Trend from 2004-05 baseline
135
130
125
120
115
110
105
100
95
90
2004/05
2006
2007
2008
2009
2010
2011

Park and Ride Passenger Journeys (annual)



Cambridge modal JTW pattern is atypical

Journey to work data from the 2001 Census shows that Cambridge *residents*:

- had the lowest rate of car use for commuting of any LA outside London
- among LAs, they had the highest cycle to work rate, 26%
  - Oxford is second with 15% cycling
- plus another 14% on foot
  - = 50% using active modes to commute *within* Cambridge city

- Proportion of households owning cars is higher than in many other urban areas
- as is average household income
  - Lack of availability of cars is not the cause of their low car usage for commuting

Current modal usage

- In 2011, DfT found the GB LAs with highest % of adults who cycle at least once per week are
  - 1. Cambridge (52%)
  - 2. Oxford (30%) …
  - 5. South Cambridgeshire (22%) …
- From 2002 to 2010 rail use increased strongly
  - Cambridge station by 51% to 23k movements daily
  - Other stations in the sub-region by 68% to 10k daily
  - Most of these trips are accessed by walk/cycle modes

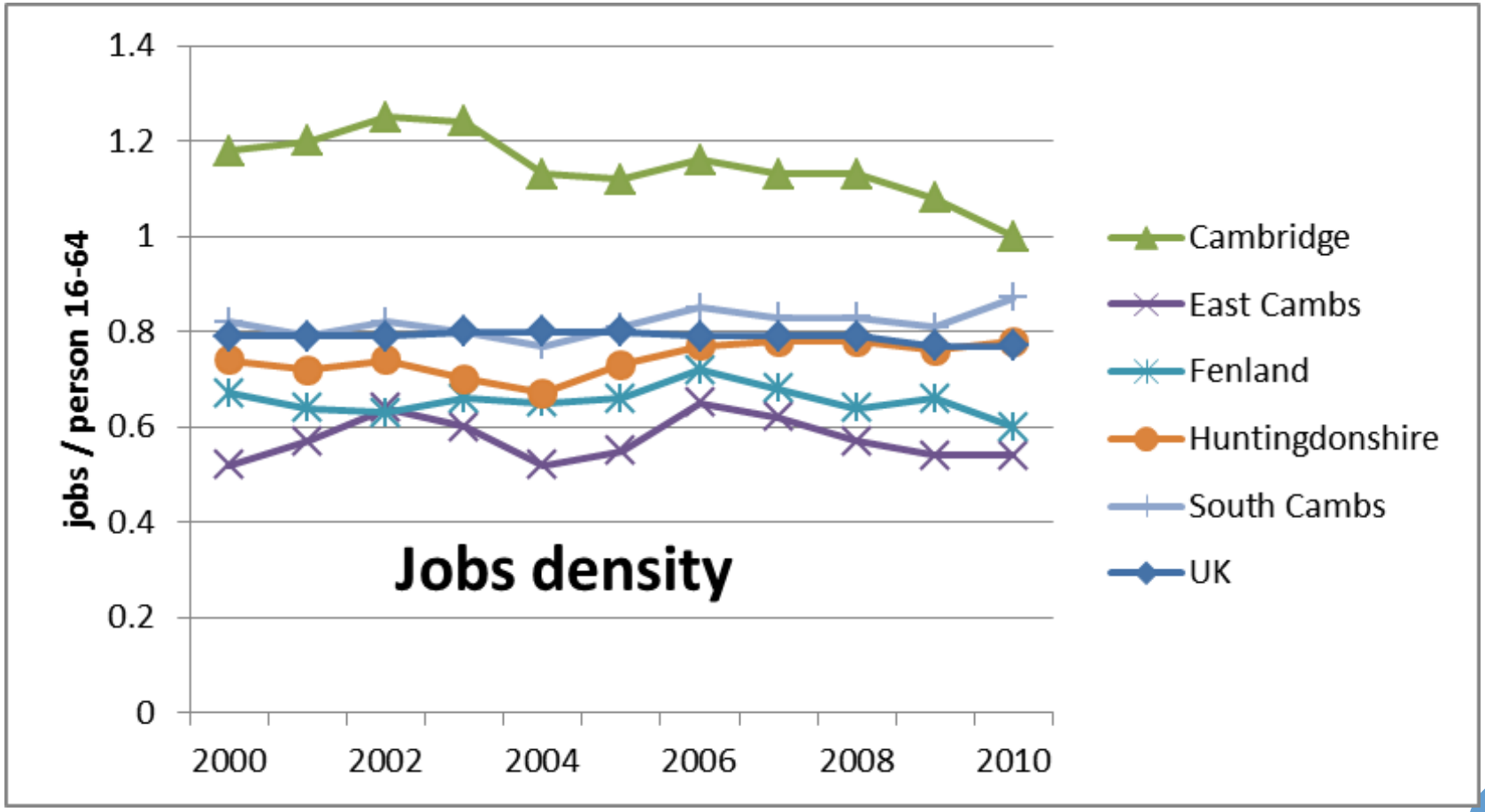
Who is most likely to cycle?

- The population of regular cyclists today
  - is very different to 60 years ago when cycling was common everywhere
- Nationally, the typical cyclist now is:
  - a white, well-educated male under 45 years old
- Cambridge city has many such people
- Cambridge also is:
  - Flat
  - Low rainfall (most years!)
- These are all reasons why its cycle rate should be higher than the national average
  - But why so much higher?

Population growth between 2001 and 2011 Census

- Cambridgeshire had UK's fastest county growth at +12%
- City residents grew by 13.8%
  - Nevertheless car traffic has declined
- Hunts. grew by 8%
- other Cambs. districts each grew by 14%

Balance of labour demand / supply



Travel implications of labour imbalance

- Equilibrium was maintained for South Cambs. and Hunts
- In the city - job numbers are stable but population grew
  - so overall balance has improved
- In Fenland and East Cambs. the growth in population exceeded growth in jobs
  - the imbalance continues and so does out-commuting to the city
- This imbalance leads to medium to long distance commuting demand that is difficult to serve
  - other than by mode car, plus some use of train
- A local equilibrium of labour supply / demand for each occupation
  - *does not guarantee* there will be no long distance commuting
- But a major local imbalance
  - *does guarantee* significant long distance commuting

Understanding their patterns and trends

Transport is a derived demand

- Most travel is carried out as a means towards an end
  - Not as an end in itself
  - So we should not look at the transport system in isolation
- Look first at the purpose underlying each trip
- Then at the context in which the trip takes place
  - quality of service of the available modes for that purpose
  - attitudes of the individual to using these modes

Why has the atypical modal pattern persisted in Cambridge?

- Historical high cycle use
  - University car ban – association with high not low SEG
- Compact city
  - relatively high density enabled walk and cycle to compete because many journeys are short
- Limited and expensive destination-end car parking
  - Workplace car spaces rationed to leave space only for those with no access to alternatives to car
- Substantial car congestion in the peaks
  - Door-to-door cycle is a fast not a slow mode
  - Despite its access/egress times, rail can compete strongly with car for commuting to jobs in the South city

For consideration

- Has the low level of car commuting been a problem for Cambridge in the past?
- Will it be a problem in the future?
  - when Cambridge city continues to grow in population, employment and geographic area
- What about those working in Cambridge but resident outside beyond cycling distance?
  - role of Park & Ride, (guided) bus, rail
- What about those accessing Cambridge:
  - on business trips?
  - for shopping and services?
  - for education purposes?
- When will adequate bike parking capacity be provided at Cambridge rail station?

Labour imbalance and transport demand

- Long distance commuting is an inevitable response to imbalances between labour supply and demand
- Should the city be building apartments in large numbers close to the rail station?
  - it encourages commuting to London which exacerbates the labour supply/demand imbalance within Cambridge city
- Would it be better to reserve this land for high density offices that could be accessed by rail and bus?
  - Instead use land elsewhere around the city for residential development