
FUTURE DEMAND AND CAPACITY PROJECTIONS

UK Ports Policy conference: Planning for the future
26th January 2011

Mike Garratt

MDS Transmodal

1. The world before the crisis

- MDST commissioned by DfT to produce long term forecasts
 - 2005 base and published July 2007
 - Incorporated in draft NPS
- 1965 – 2005 GB port traffic grew by 1.4% per annum
 - Slowing in latter years

Port traffic 1990 – 2005 (UK)

- Unitised goods grew 4.7% per annum
- Energy goods grew 1.4% per annum (exc. crude oil exports)
- All other goods fell 0.8% per annum

Reflecting

De-industrialization, a consumer boom and pit closures

2. Forecasts based on 2005 (used in NPS)

m tonnes

	2005	2015	2020	2005-'20
Liquid bulk	260	267	277	+7%
Dry bulk	120	98	105	-12%
Semi bulk	32	35	35	+9%
Lo-lo	40	61	71	+77%
Ro-ro	85	115	133	+56%
Overall	537	576	621	+16%
	Excluding domestic:			+18%

- Overall growth 2005 – '20 forecast at 1.0% per annum
 - Unitised to grow at 3.3% per annum
- But (corresponding) actual tonnes in 2009 down 15%
 - recovery in 2010 expected to be around +5%

3. Industry's view (Transport Select Committee Jan. 2007, para 27))

“Many more witnesses were concerned with what they considered to be MDST’s ‘conservative’ four per cent estimate for future growth.

David Robinson of PD Ports told us that since 1994 growth has been at seven per cent a year and that there was strong evidence to suggest that the growth rates of containerised traffic were likely to be in the order of five–and-a-half to six per cent a year in the future.

David Cross of CMA CGM put the figure at six per cent to 2010, perhaps going as high as seven or eight per cent.

In Dover, port traffic has already reached the previously projected levels of freight for 2014. It is the relationship between the forecasting and the projected and planned growth.

Similar estimates were given by Simon Bird, Bristol Port Company (Q184) and Michael Everard, Chamber of Shipping.”

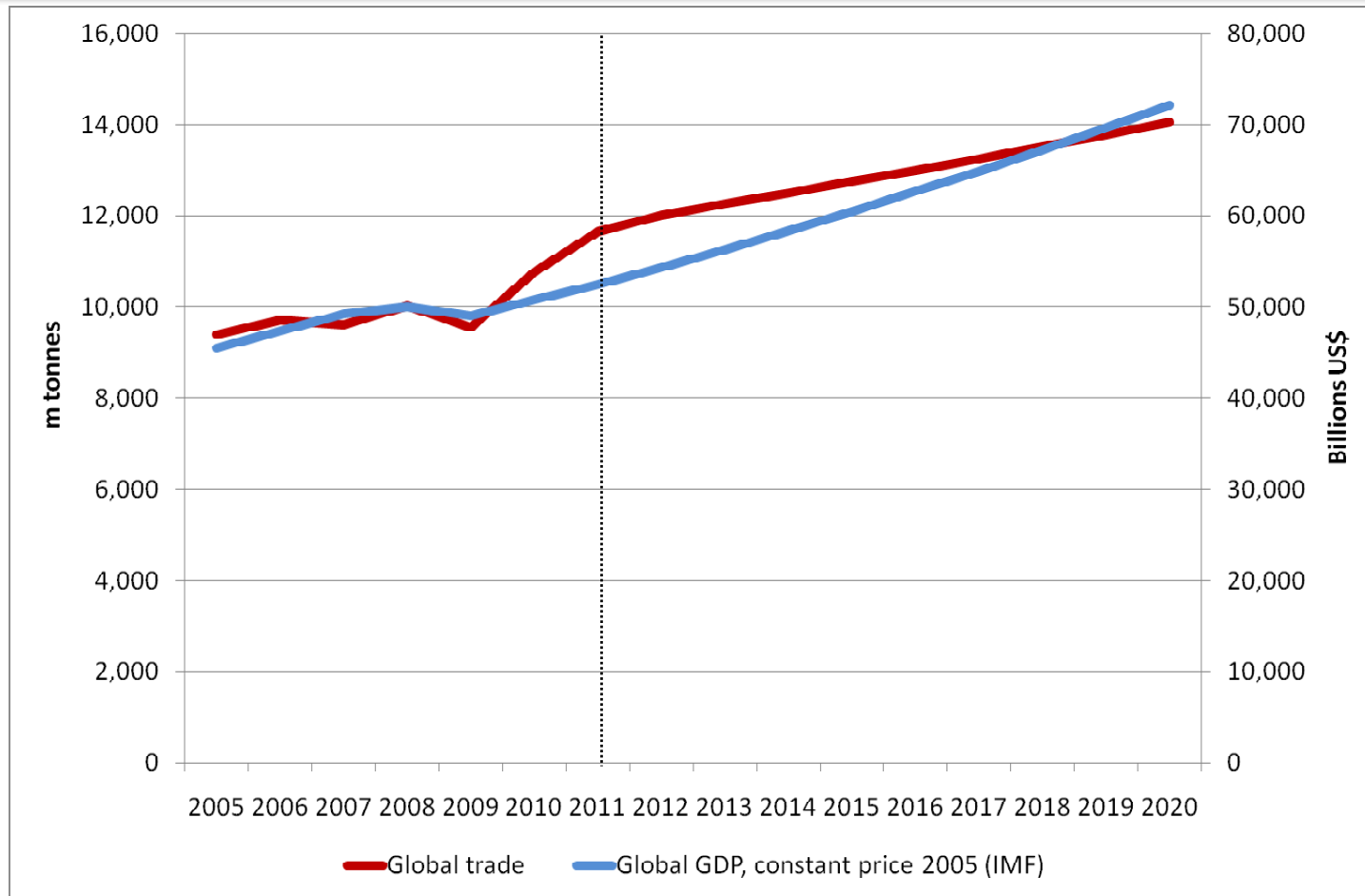
4. Draft NPS for Ports

- MDST forecasts criticised by industry evidence to 2007 transport committee as being too cautious
- Draft NPS said:
“Government’s view is that the long term effect (of recession) will be to delay by a number of years but not ultimately reduce the eventual levels of demand for port capacity predicted in these forecasts”. (November 2009)
- UK GDP for 2011 approx 10% less than was assumed in 2005
 - Depth of recession may have been underestimated!
 - MDST 2005 based forecasts were based on continuing economic growth
- Publication in 2009 of “Low carbon transition policy”.
- Revised projections based upon the new reality!

5. Post crisis and climate change policies

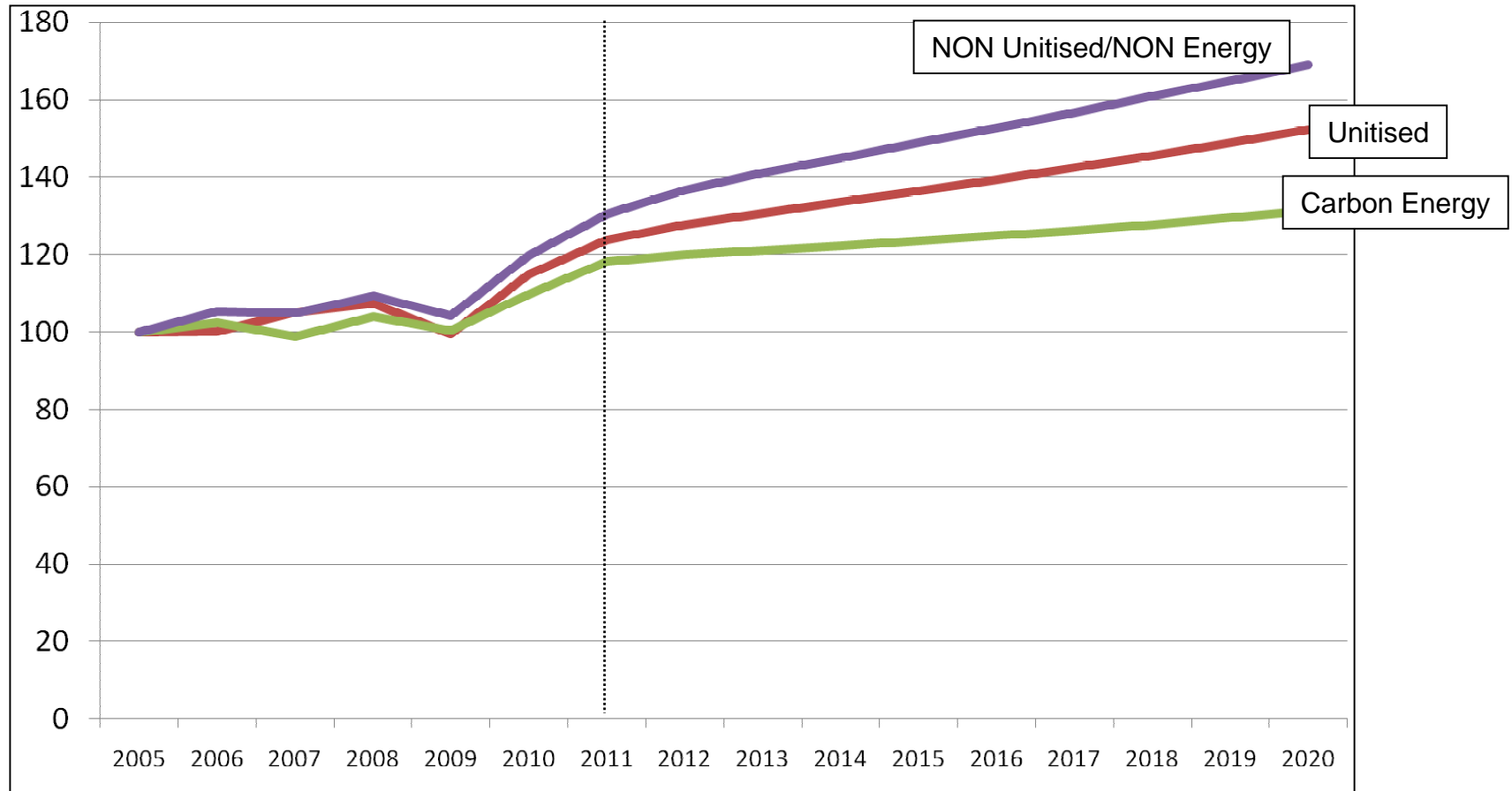
- Global trade of 10 billion tonnes in 2008 fell 5% in 2009
 - Unitised cargo fell 7%
- But strong growth in 2010
 - Total world trade now a record at 10.8 billion tonnes
 - Unitised trades now exceed 2008 peak
- Trend forecast for all international trade (tonnes) implies +3% per annum to 2020
- But UK low carbon transition policy to hit coal, gas and oil imports

6. Trend based forecast for global trade



Trends imply 2005 – 2020 growth of 2.7% in globally traded tonnages

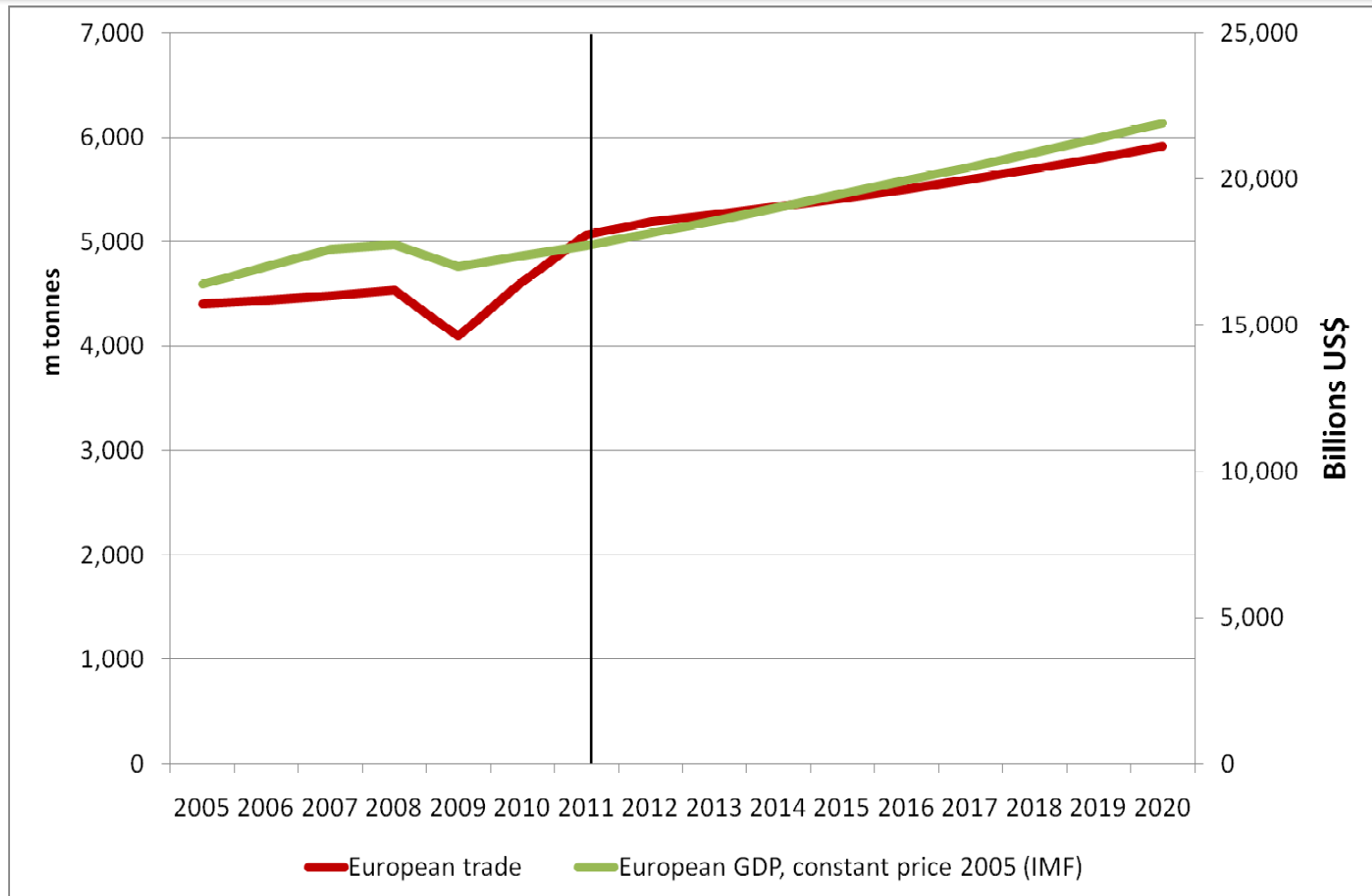
7. Projections for global trade, Index 2005=100



Growth may be strongest in bulk commodity categories:

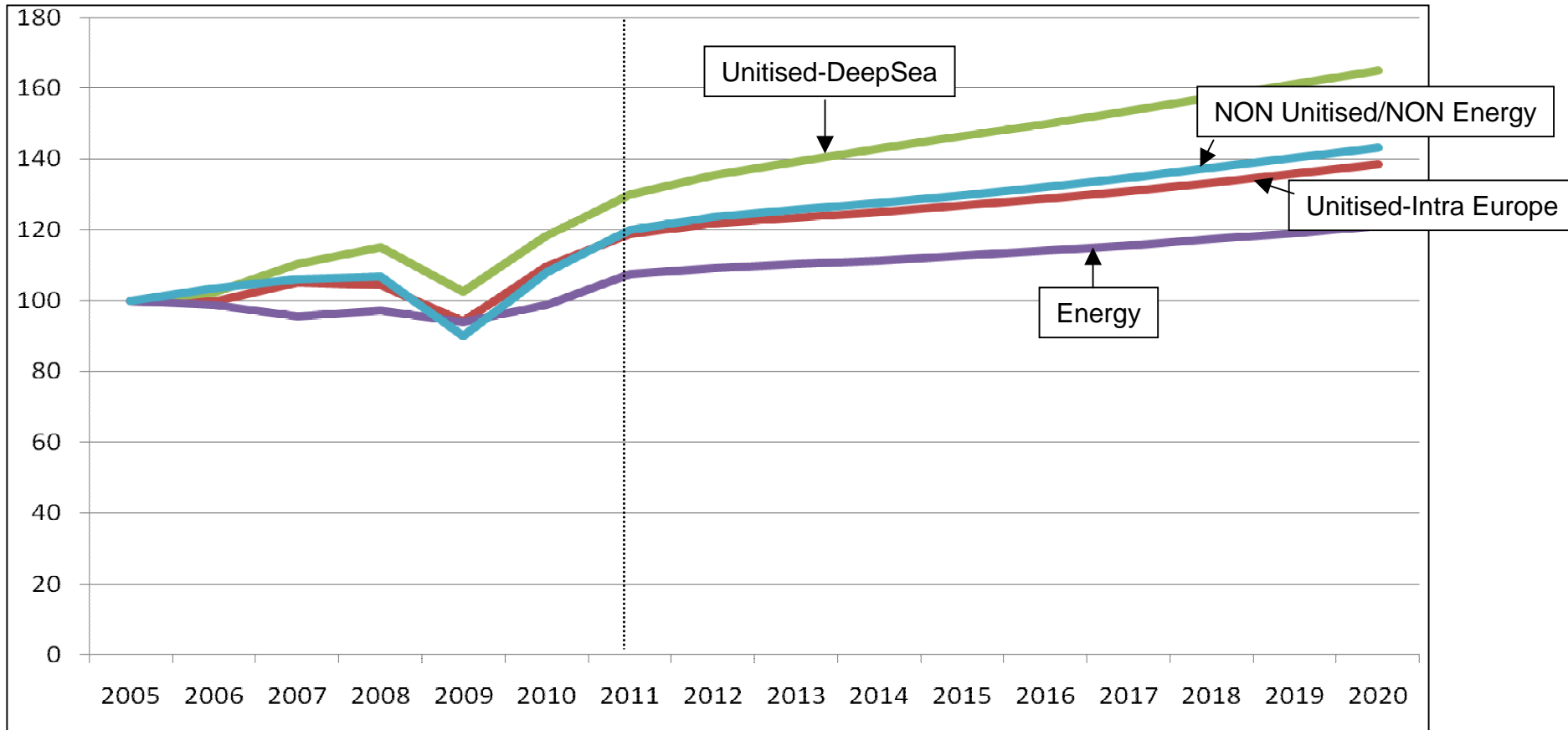
- non unitised/non energy growing +3.5% p.a. 2005 – 2020
- unitised trades growing +2.9% per annum 2005 - 2020

8. European trade – lower growth (intra + extra)



Trade recovering: forecast +2.0% p.a. 2005 - 2020

9. European trade, Index 2005=100



Growth strongest in deepsea sectors

- increasing dependence on non European producers
- deepsea containers to grow +3.4% per annum 2005 - 2020

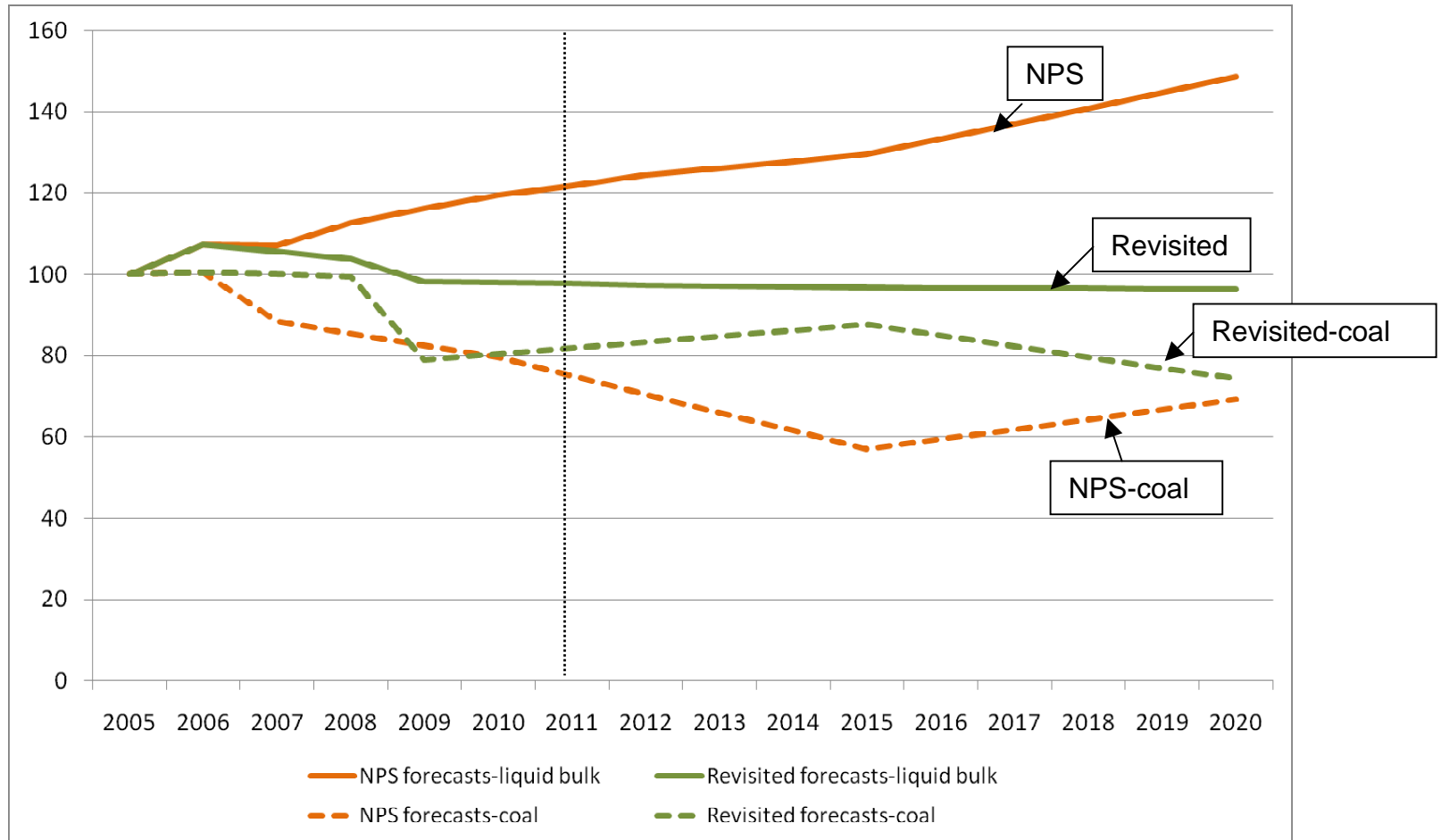
10. Wider picture

- Energy goods growing at slowest rates
 - increasing energy efficiency
 - renewable
- Non energy dry goods growing strongly
 - industrialisation in developing economies (raw materials)
 - population growth driving food trades
- Unitised goods
 - continuing growth

For the UK

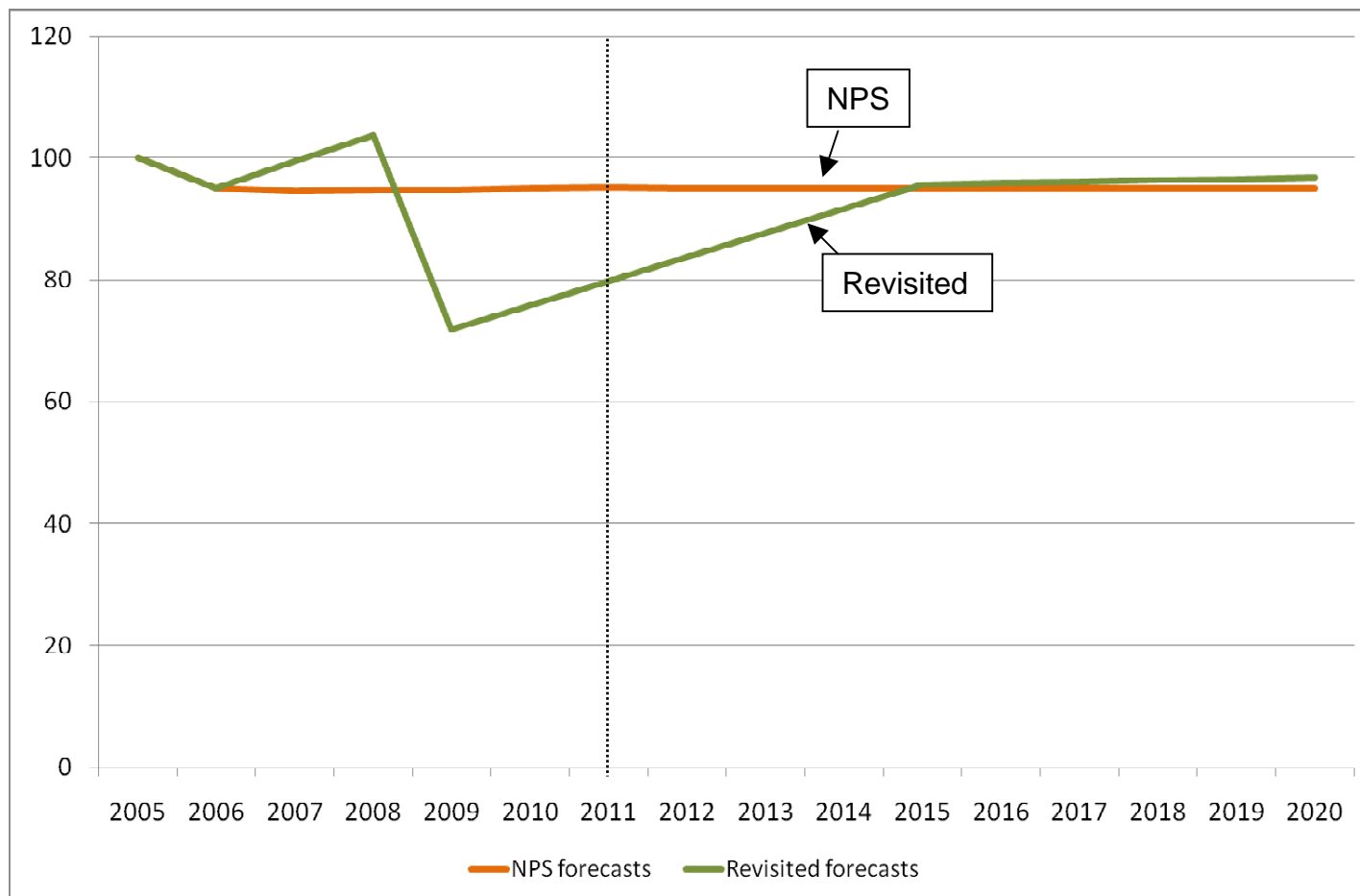
- Minimal growth per annum for international tonnages
 - Deep-sea unit load trades to grow @ 2.5% per annum
 - Short-sea trades to grow @ 1.5% per annum
 - Decline in coal, no more oil and less gas than anticipated
 - Coastwise (mode switch) traffic may be source of growth

11. Revised forecasts for GB ports – carbon energy (excl. crude oil exports)



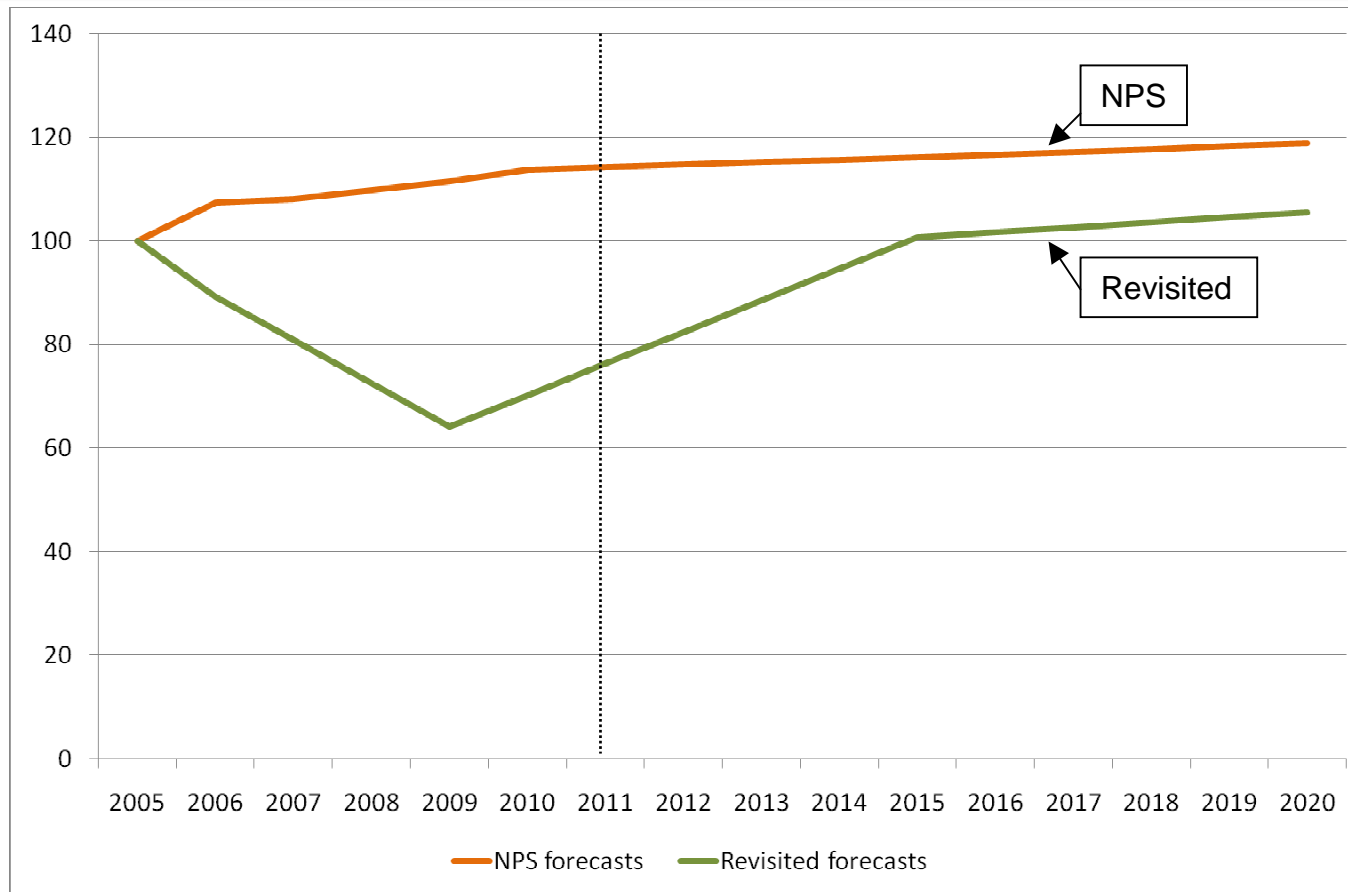
Bulk liquids and gas imports likely to be flat and coal to decline

12. Revised forecasts for GB ports – non carbon dry bulk (excl. coal)



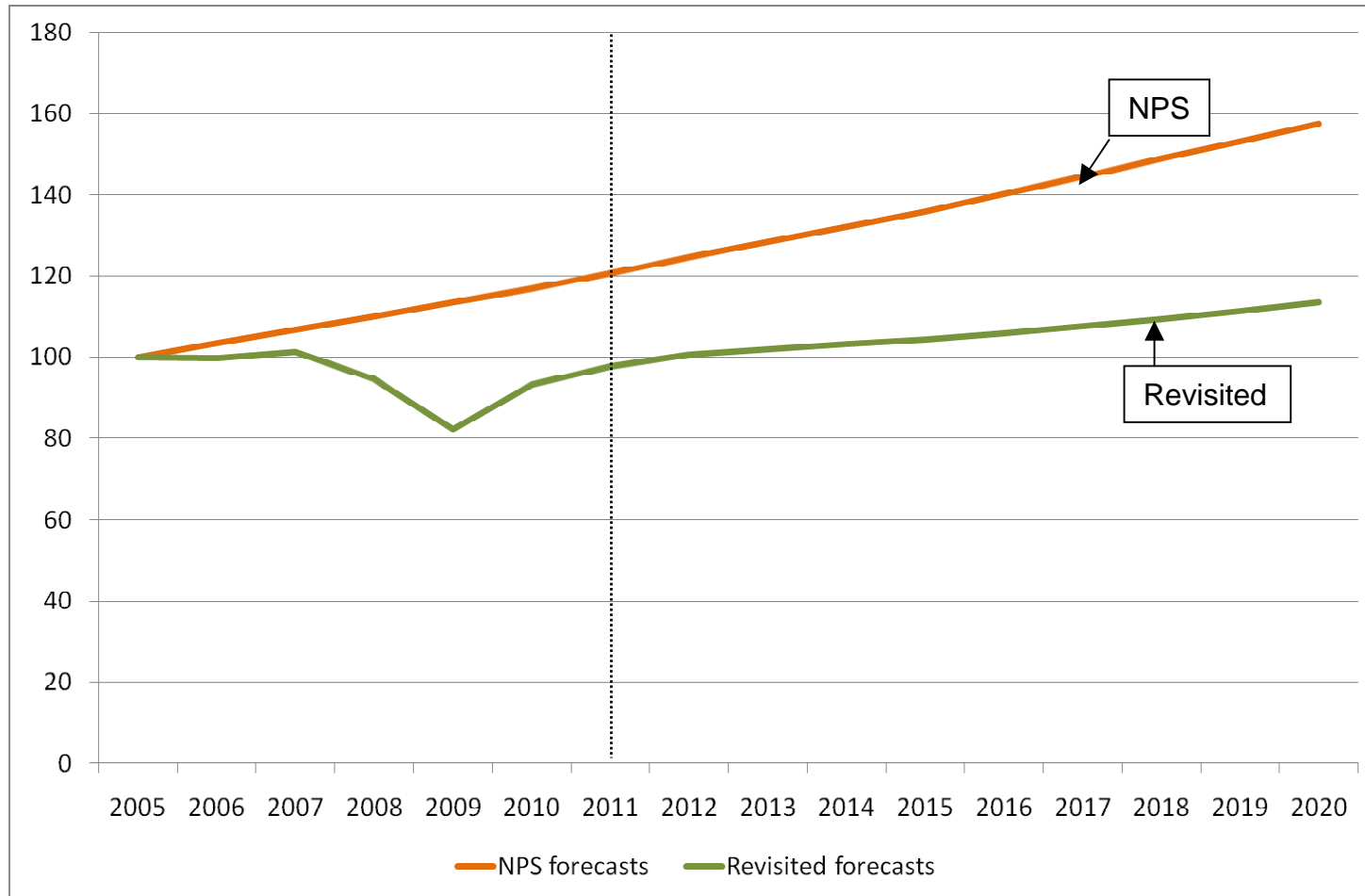
Volumes likely to be recovered but few growth prospects

13. Revised forecasts for GB ports – Other general cargo



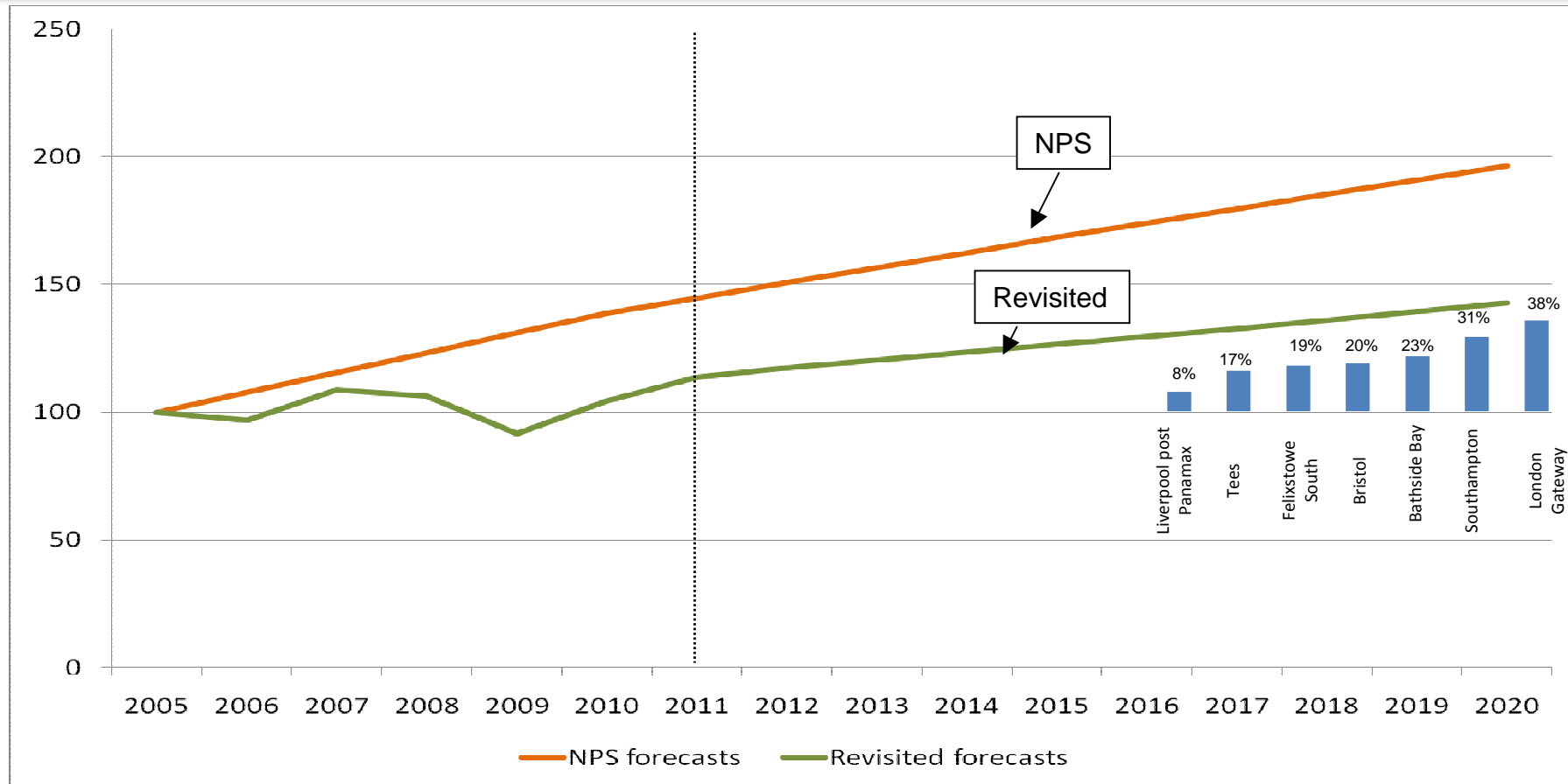
Severe fall in forest products and steel 2005 – '09 but likely to recover.

14. Revised forecasts for GB ports – Roro (units)



Growth in ro-ro trades from Continent recovering more slowly than deep-sea trade...substitution by lower cost suppliers

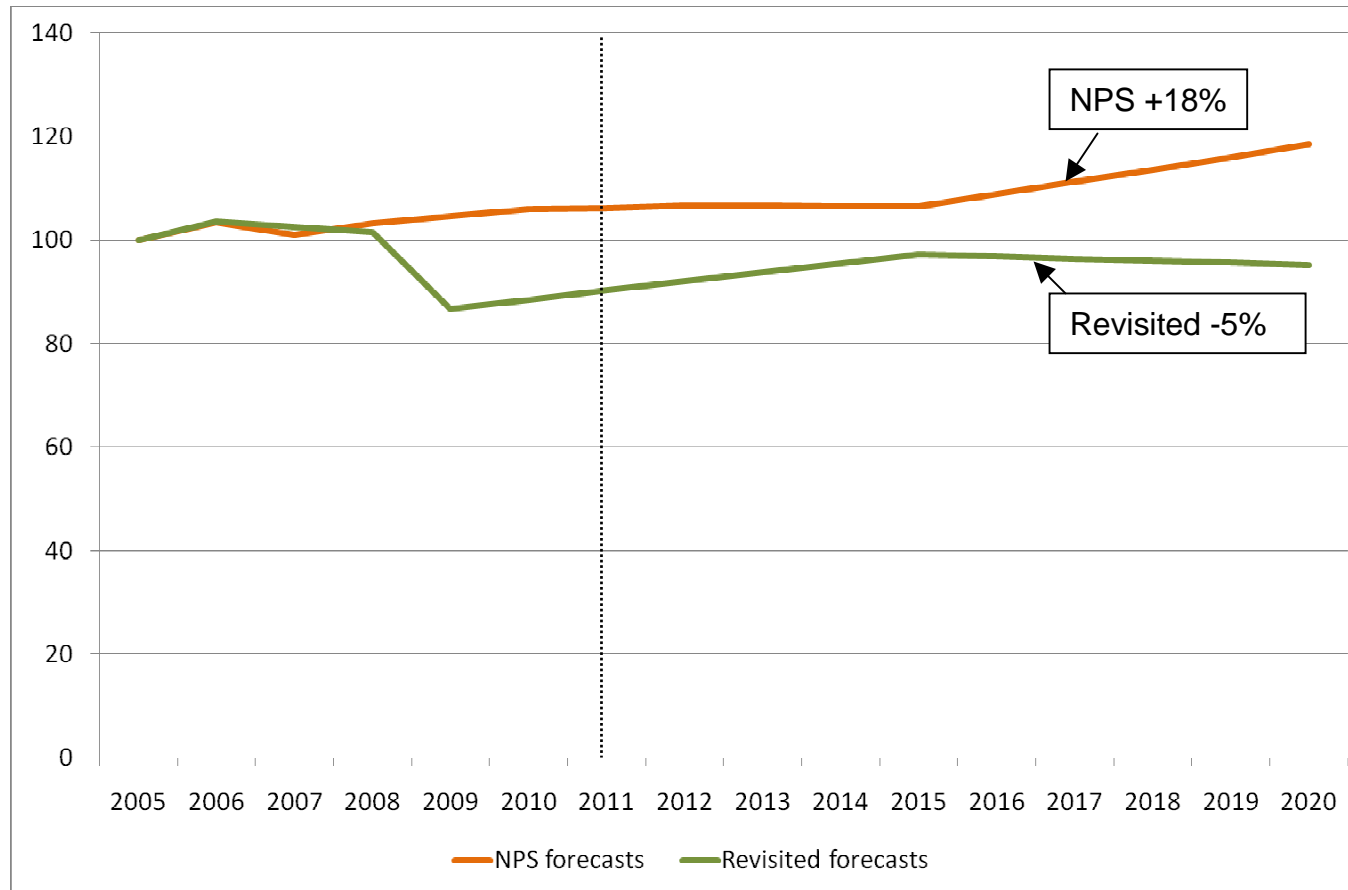
15. Revised forecasts for GB ports – Lolo (TEU)



Lo-lo (deep-sea) trade growth returning but from a lower base

-Not all planned lo-lo terminals will be required soon!

16. Revised forecasts for GB ports – total (excluding crude oil exports)



Overall port tonnages may not recover to previous levels as carbon energy imports fall

17. Demand summarised

- Original analysis demonstrated no general shortage of capacity for non unitised cargo
- Ro-ro capacity generally limited by quay area
 - 2005 based exercise forecast + 57% growth 2005 to 2020
 - Current update forecasts only + 15% growth
- Lo-lo capacity limited by quay length and area
 - 2005 based exercise forecast + 96% growth 2005 to 2020
 - Current update forecasts + 44% growth

18. Supply & Demand

Implications for ro-ro

- Assessing constant mix of accompanied & unaccompanied ro-ro freight
 - Need limited to + 85 hectares of ferry parking space
 - Trade car traffic growth will be limited
- But a case for much greater area if switch towards unaccompanied trailers and containers on longer routes

Implications for lo-lo

- Capacity hitherto assumed required by 2020: +4,000 quay metres
 - Now appears more than sufficient until 2030
 - Corresponds to capacity of Felixstowe South, London Gateway and Liverpool Post Panamax
- But may be case for further development to reduce inland hauls/promote port centric development

19. A broader perspective on demand for port services

- In 2000 key issue in port sector was container handling capacity
 - User criticism of congestion
 - Pressure to accommodate larger ships
- Planning system gradually accommodated case for growth based on 'need' to accommodate traffic growth so that several ports now have consents

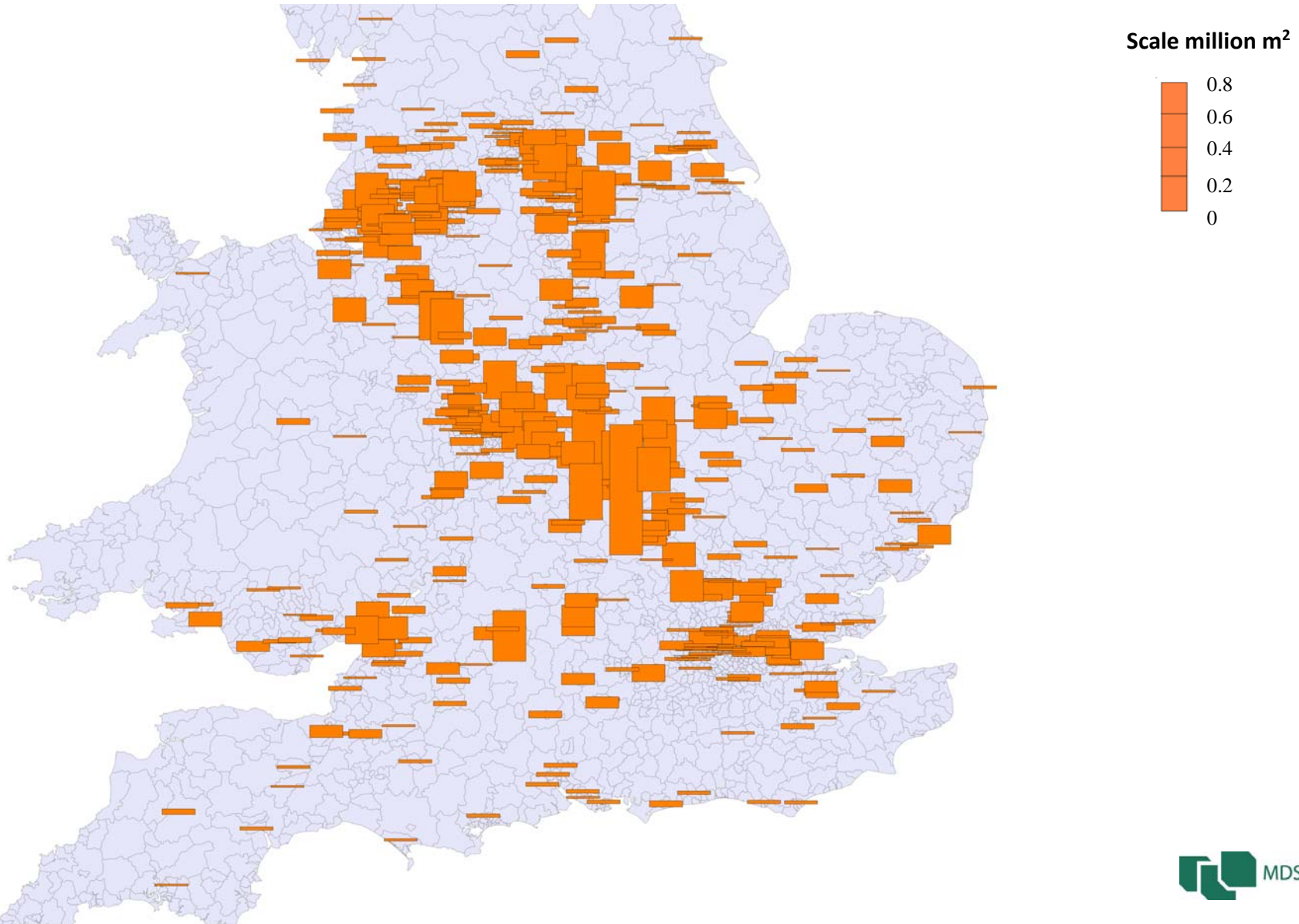
However

- Agenda has changed from congestion to climate change
 - Opportunity for port estates to address emissions and carbon
- New **planning** agenda could include
 - Development of port centric distribution to reduce wasteful inland haulage
 - Creating space/capability for green energy (biomass/wind farm development)
 - Capacity for short sea shipping terminals to reduce overland trucking

20. Portcentric opportunities

- High proportion of consumer goods imported
- Portcentric locations reduce total inland haulage distances to receivers
 - providing DCs are mainly devoted to imports or close to domestic producers
- Implication is port estates need to expand to deliver a greener solution
- Ports more likely to be already rail linked with intermodal terminals for domestic as well as international cargo flows
- DCs in maritime communities closer to supply of labour and more likely to accessible by public passenger transport

21. Warehouses – England and Wales (>10,000m² by Post Code District



22. Unitised imports by port region (>5m tns p.a.)

	Port throughput	Warehousing (exc. Scotland)
Kent	30%	1%
Suffolk	18%	1%
Essex/London	15%	7%
Humberside	13%	2%
Hampshire	7%	1%
Merseyside	7% *	3%
All others	<u>10%</u>	<u>85%</u>
	100%	100%

* Inc traffic from N.Ireland

Counties with 90% of unit loads account for only 15% large warehouses

23. Short sea shipping

- To reduce length of inland haulage to reduce carbon
 - by extending maritime leg
- Longer ferry routes imply less frequent unaccompanied trailers/double stack container services
- Longer dwell times/less frequent services
 - require larger trailer/container park areas
- Another argument for larger port estates integrated with distribution centres

24. Green Energy

- Biomass based power stations
 - Mainly reliant on imported material so will be port located
 - Material more space hungry than coal or oil
 - Cost advantages to being within a port estate
 - Need not follow geography of pit based coal fires stations
- Windfarms clearly more acceptable and efficient at sea
 - Requiring large port areas for maintenance and assembly
 - Opportunity to share grid connections if integrated with biomass power generators
- Another argument for larger port estates!

25. Summary

- Post recession, port forecasts reduced
 - overall 2005-2020 changed from +18% to –5%
 - Lo-lo traffic growing again but from a reduced base
- Principal causes are revised energy policy and 10% cut in GDP
- Case for new unit load terminal capacity significantly marginally reduced
- However, ‘green’ agenda proportionately more important in making case for expanded port estates
- Important for ports NPS to quantify such issues
 - and not be so focussed on deep-sea container capacity!