

# North Quay Fremantle Truck Survey 2009



**Analysis and Conclusions**

**8<sup>th</sup> Annual Truck Survey**

**November 2009**





# Survey objectives

To observe changes in road-based container handling  
by monitoring:

- Container truck numbers
- Proportion of container trucks in local traffic
- Container truck types
- Container truck loading (TEU/truck)

# Survey locations



Port Beach Road  
survey site

Tydeman Road  
survey site



# Data collected

- Data collected over two consecutive weeks
  - Week 1 – Monday 7<sup>th</sup> September to Friday 11<sup>th</sup> September 2009
  - Week 2 – Monday 14<sup>th</sup> September to Friday 18<sup>th</sup> September 2009
- Survey carried out over 16 hours, 0600hrs to 2200hrs
- Week 1 all vehicles, light and heavy recorded
- Week 2 only container trucks recorded
- Trucks classified by cargo type and axle configuration
- Number and size of containers carried recorded



# How many container trucks a day?

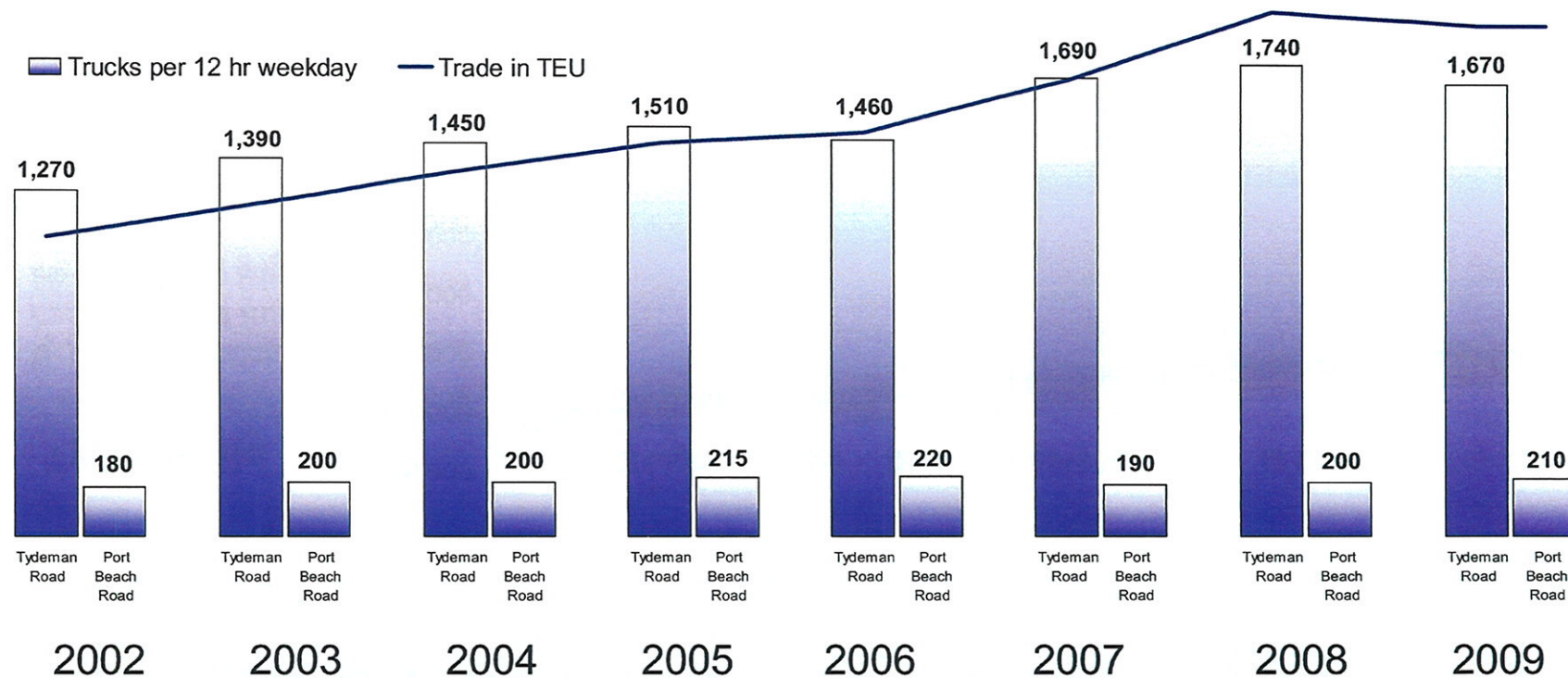
1,880 container trucks observed per 12 hour weekday

3.1% fewer trucks than in 2008

2.6% drop in annual container trade

Trade increased by average of 8%pa to 2009

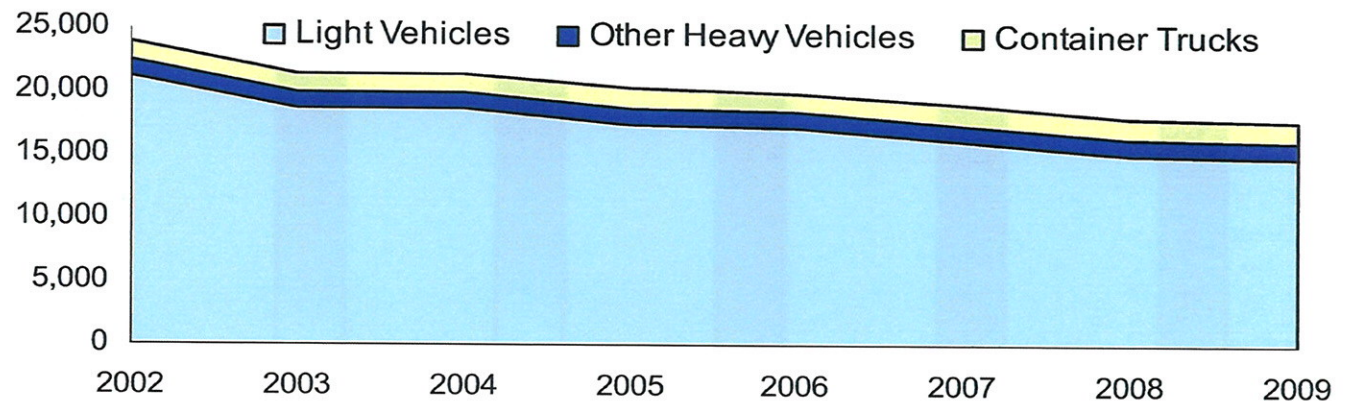
Truck numbers increased by average of 4%pa to 2009



# How much other traffic is there?

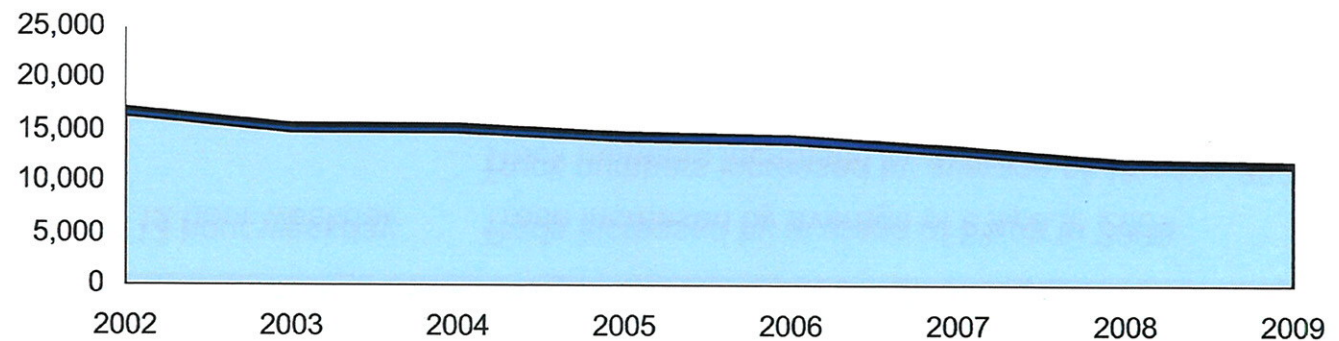
## Tydeman Rd

% container trucks  
has increased from  
5% in 2002 to 9% in  
2009



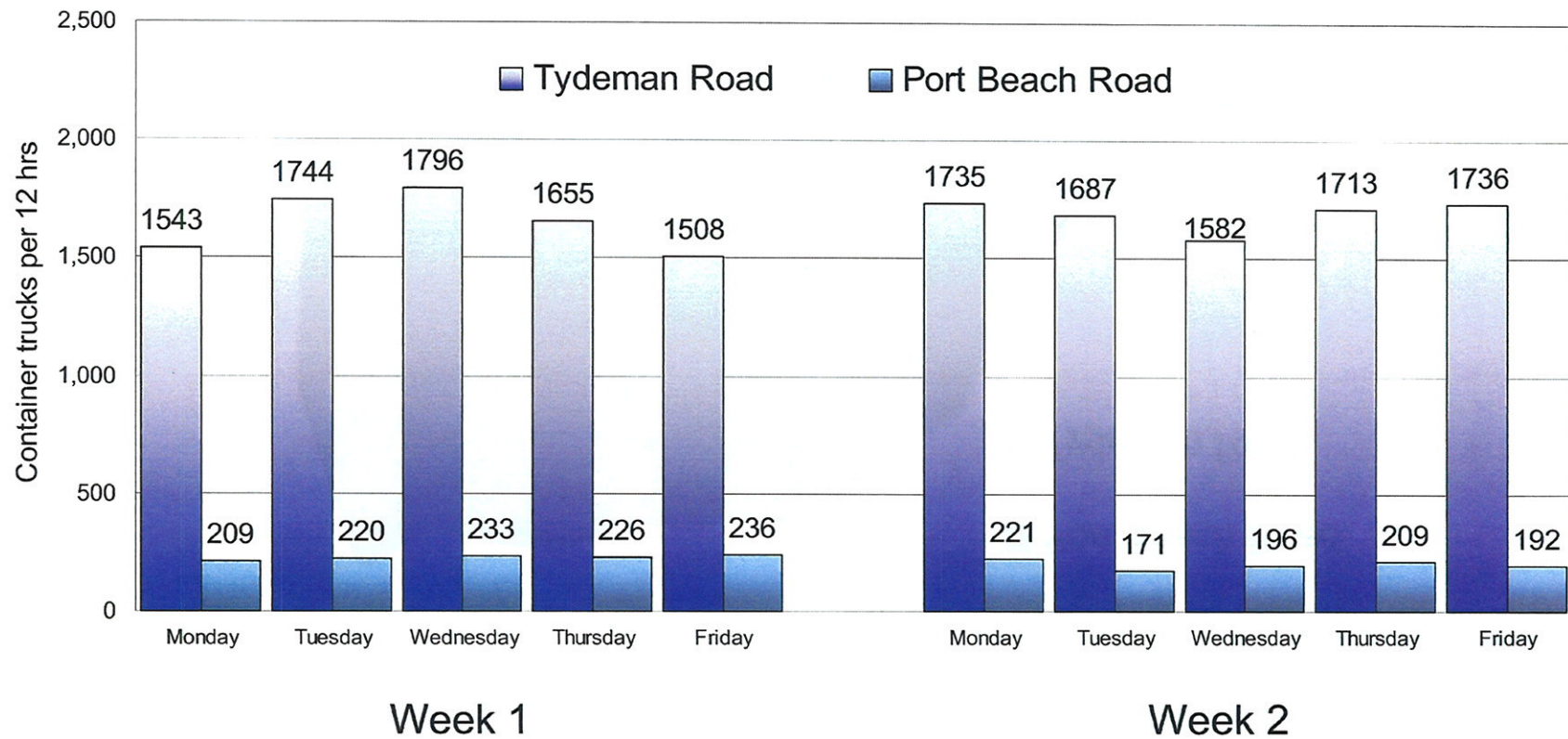
## Port Beach Rd

% container trucks  
has increased from  
1% in 2002 to 2% in  
2009

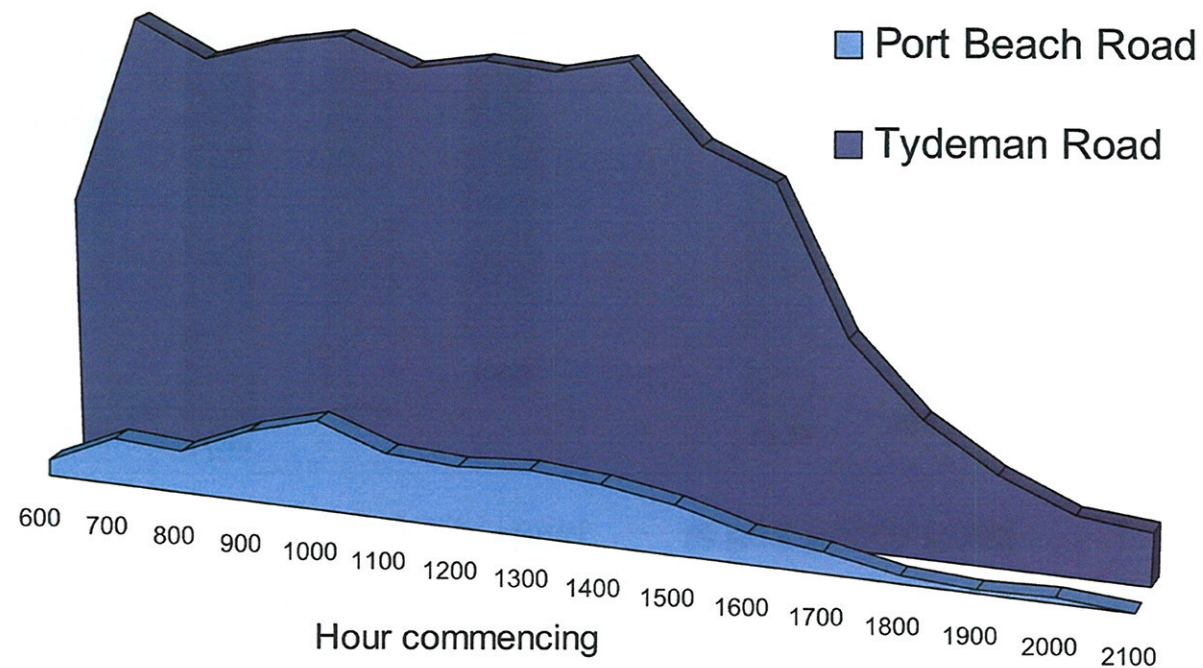




# How does this vary over the survey period?



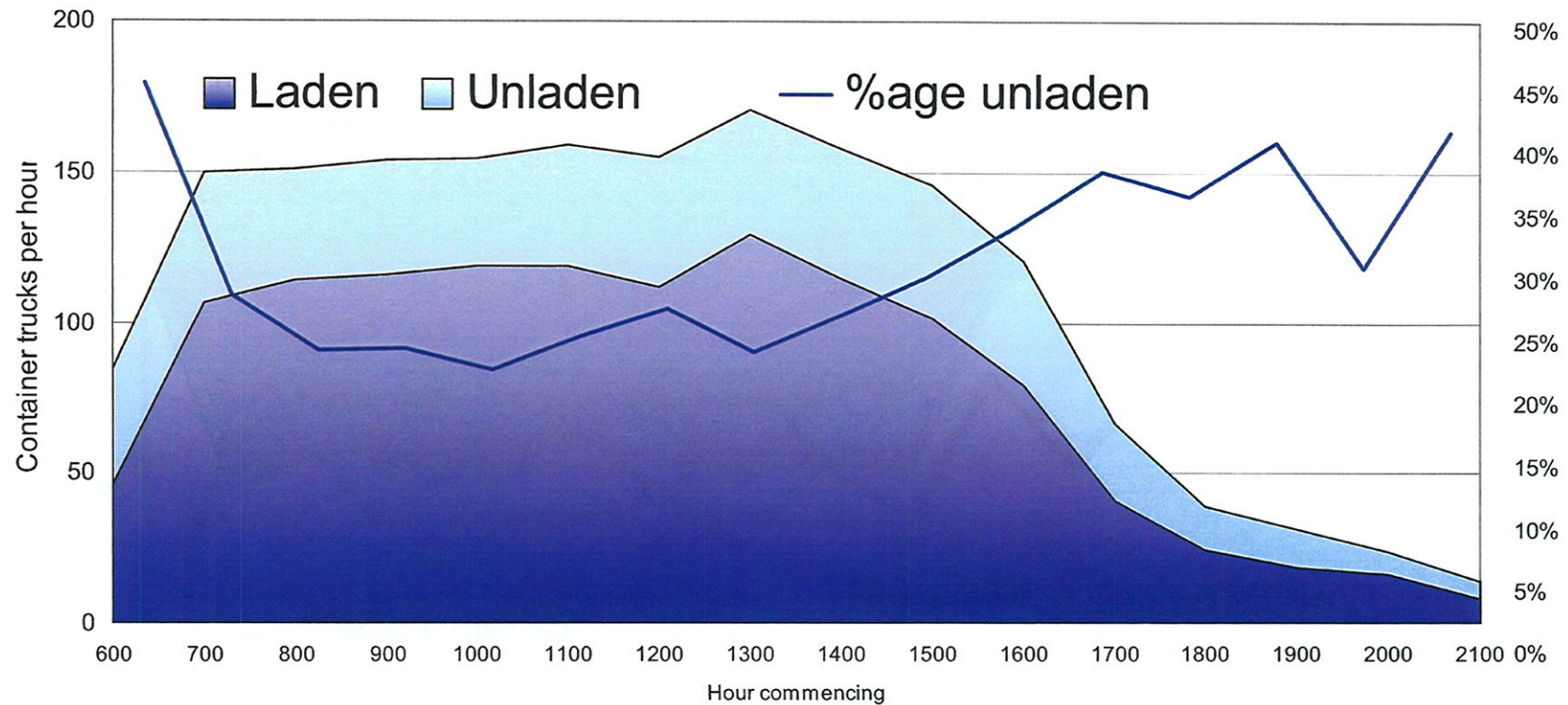
## How does this vary over the course of the day?



Only 6% of trucks appear after 6pm and 76% of trucks appear before 3pm



# Empty truck running on Tydeman Road

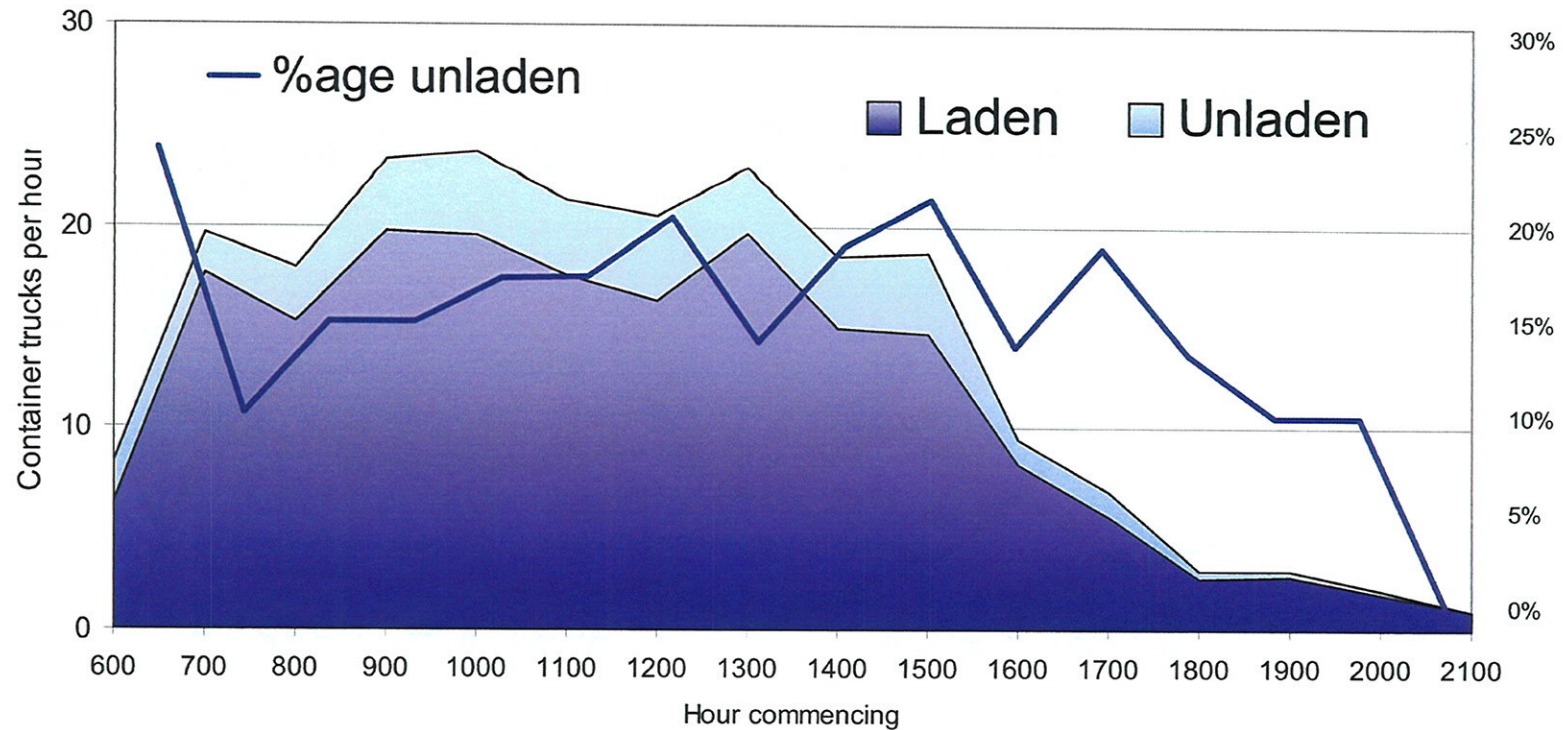


Over 16hrs on an average weekday there are 511 unladen trucks on Tydeman Road

31% of trucks heading into the port and 26% of trucks leaving the port are unladen



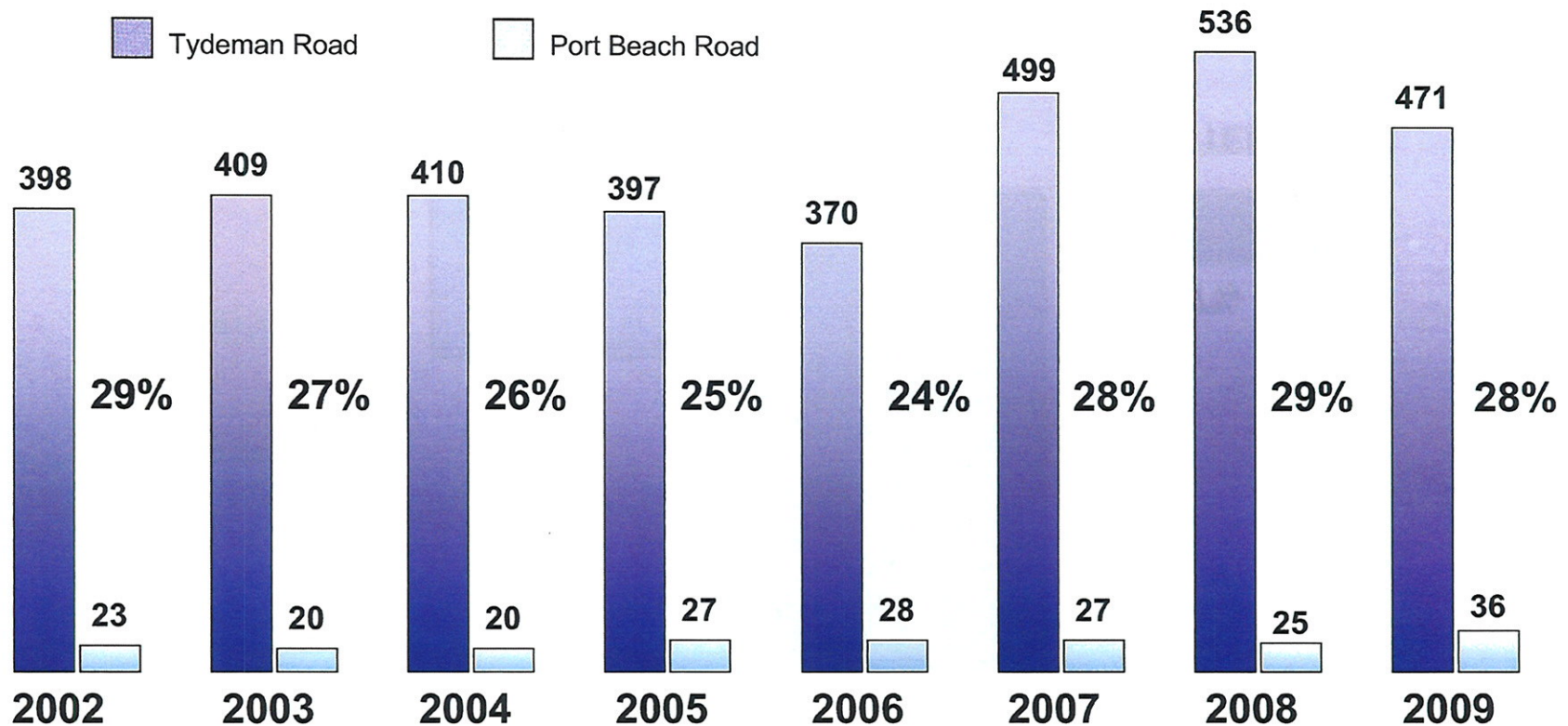
# Empty truck running on Port Beach Road



Over 16hrs on an average weekday there are 36 unladen trucks on Port Beach Road  
20% of trucks heading into the port and 13% of trucks leaving the port are unladen

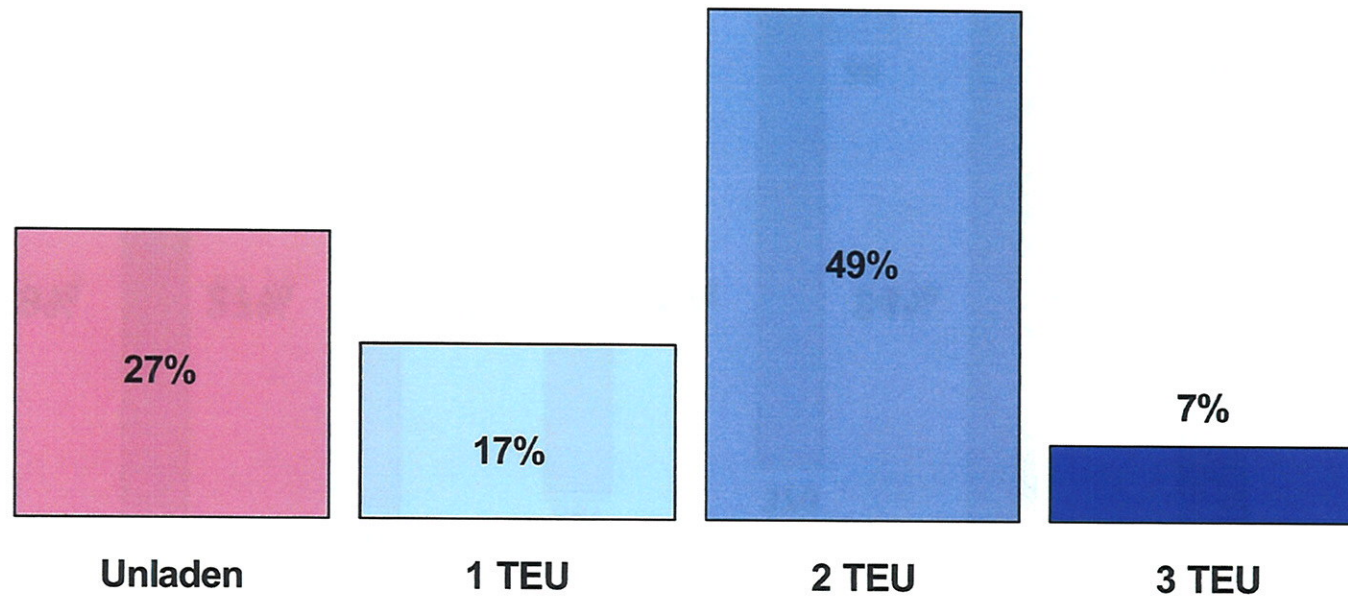


# How has empty running been changing?



507 unladen trucks were observed over 12 hrs

# How many TEU are the trucks carrying?



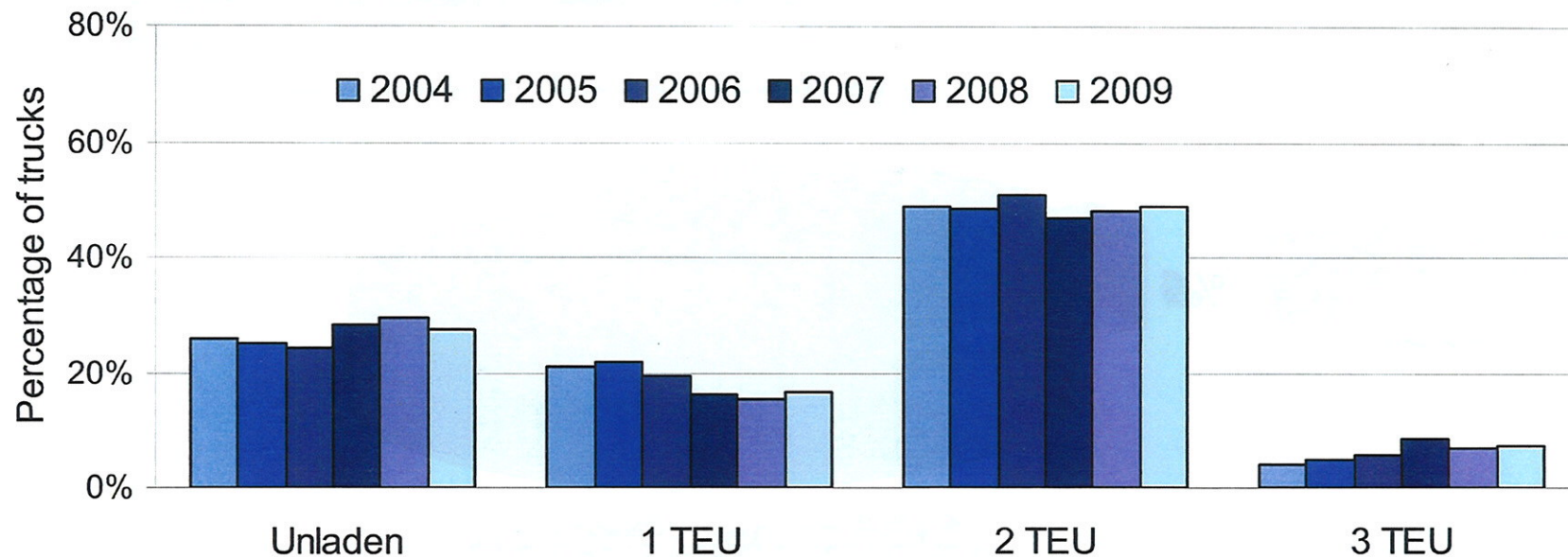
Empty trucks and those with 1TEU carry only 12% of the task but represent 44% of all trucks

The proportion of trucks carrying 3 TEU remains static at 7%

56% percent of the trucks carry 88% of the TEU task



# How has this been changing over time?

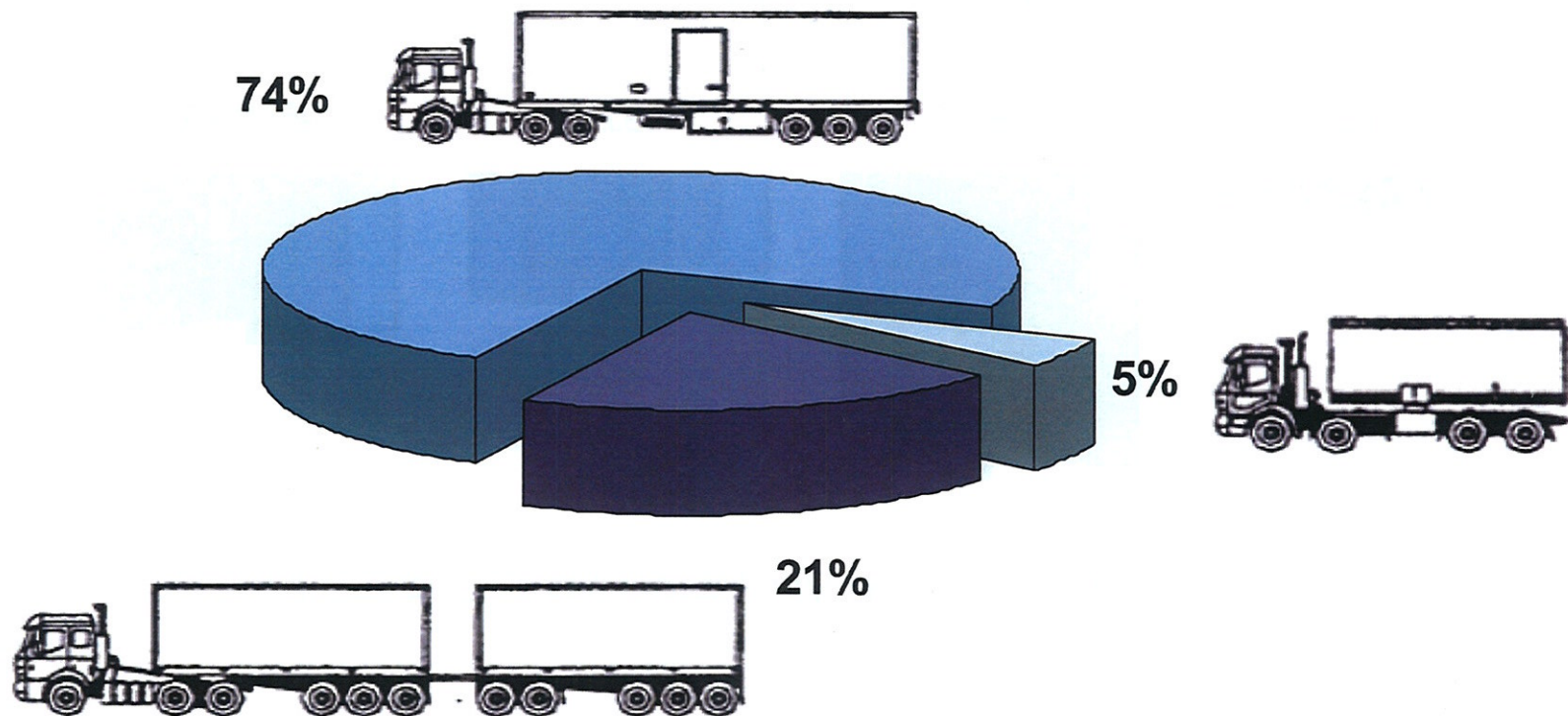


Empty running has decreased this year and the proportion of trucks carrying 3 TEU has stayed the same. Those carrying only 1 TEU has risen slightly.

However, changes are small....



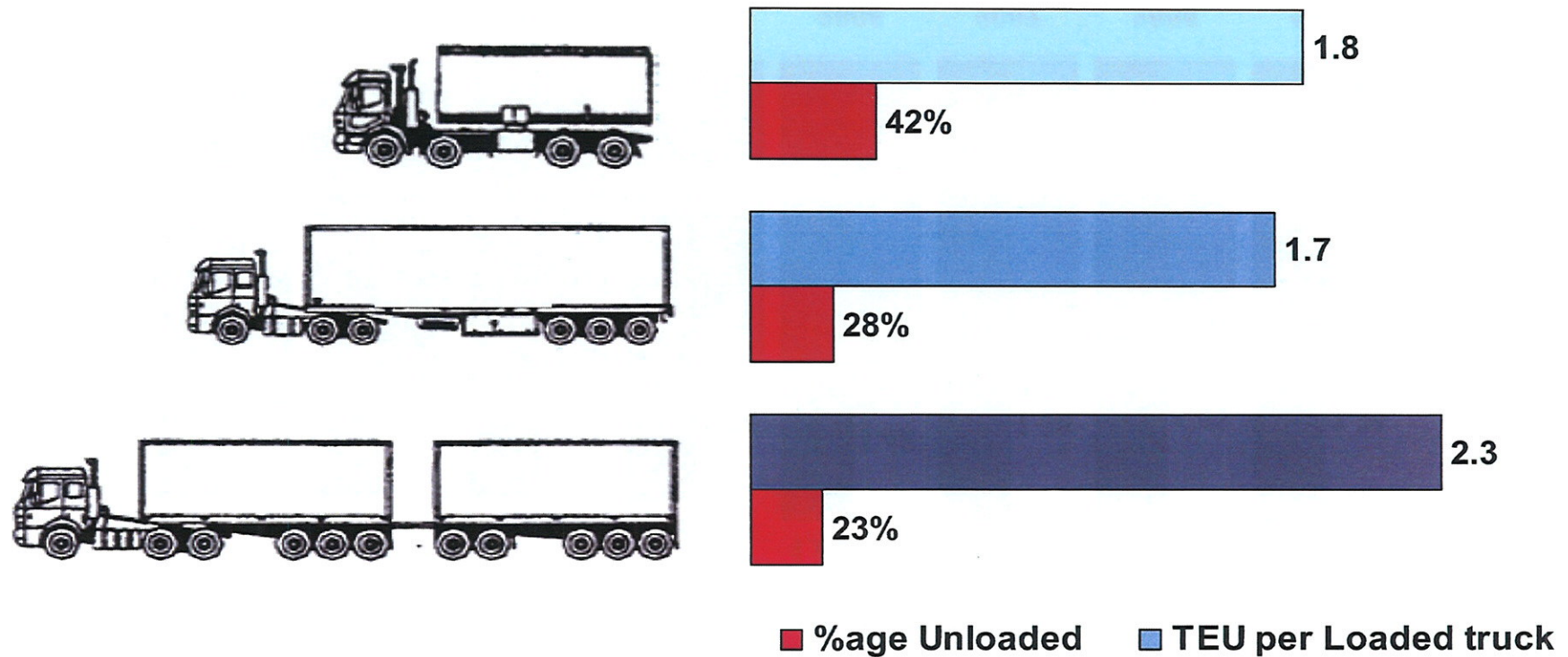
## What types of truck are servicing the trade?



The truck fleet composition remains fairly constant and is dominated by 6-axle semi-trailers

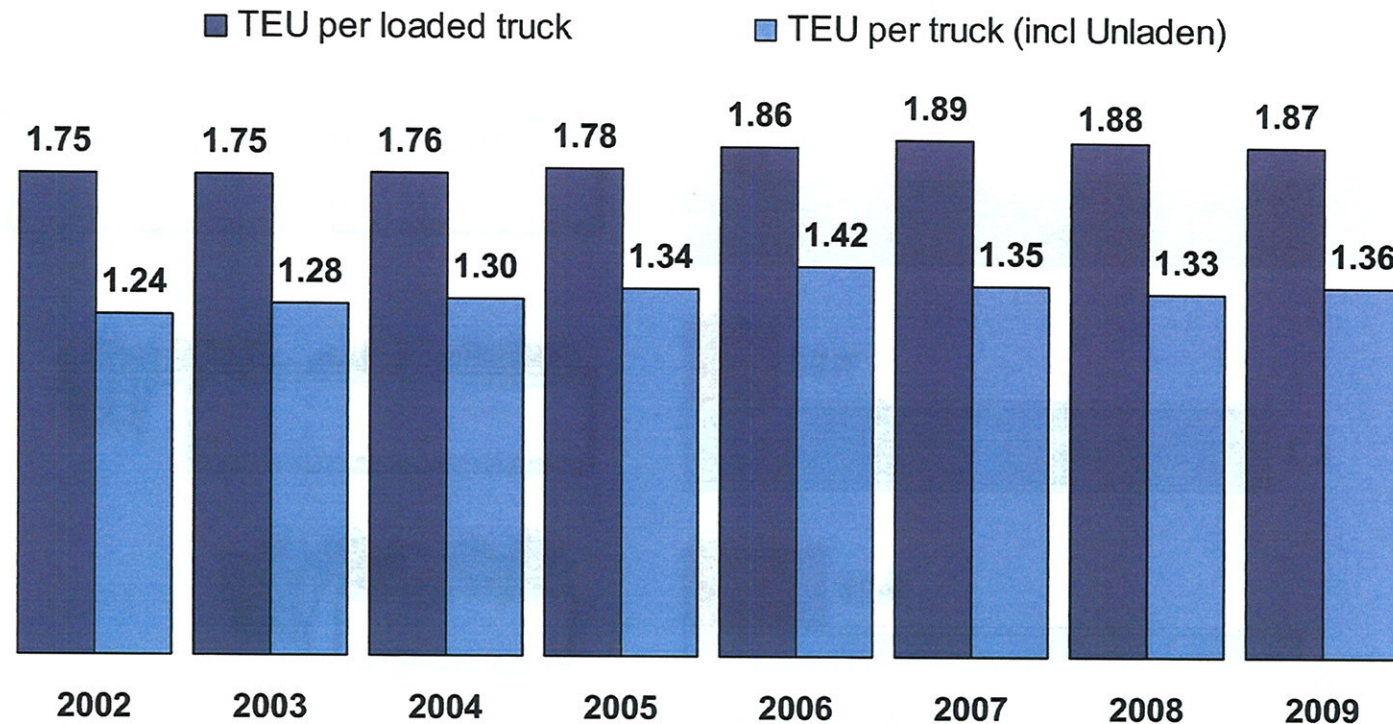


## What are these types of truck carrying?





# How has truck loading been changing?



TEU per truck has increased slightly when unladen trucks are taken into account.  
However, TEU per laden truck has decreased slightly. Again, changes are small....



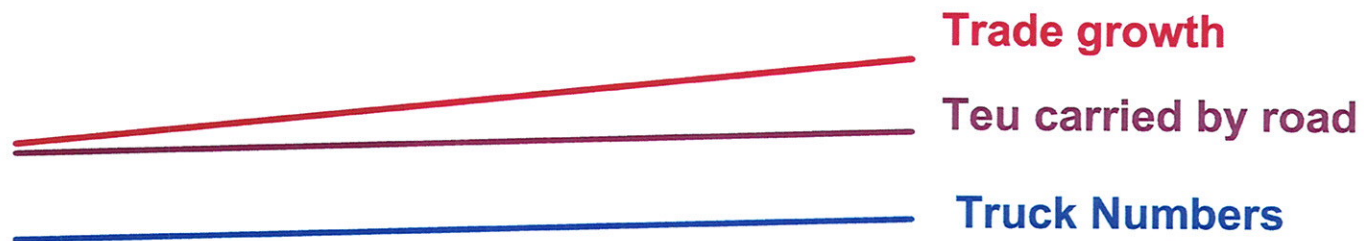
# Trucks with Lifting Capability



- Some 38% of all container trucks have lifting capability
- Almost all of these are 6-axle semi trailers
- Laden trucks with lifting capability carry only 1.67 TEU compared with 1.87 for all container trucks
- These trucks comprise 59% of container trucks on Port Beach Road
- But only 35% of container trucks on Tydeman Road



## Overall Trends



### Good News:

Truck Growth has not matched trade growth

### Bad News:

TEU carried by road is essentially trending parallel to truck growth

Implying that the difference is primarily due to increasing rail share, not productivity improvement.

## Summary – road-based container task

- In the 12 months to June 2009, port throughput decreased by 3%
- In the 12 months to June 2009, container truck numbers decreased by 3%
- During the “average” survey week some 10,000 container trucks were observed serving the port. These trucks carried a total of 13,600 TEU
- TEU carried during the “week” was only 2.3% down on last year
- Truck productivity therefore increased slightly
- **Activity remains concentrated in the 12 hour period 6am to 6pm with 94% of all observed truck movements happening within this time period.**



## Summary – truck loading

- Empty running on Tydeman Road has decreased slightly. 28% of trucks travel unladen, reversing the upward trend observed in the last few years.
- Empty running on Port Beach Road has increased from 13% to 17%
- There are now 547 unladen trucks per 16hr day servicing the port representing 27% of all trucks.
- On average each loaded truck carries 1.87 TEU, a small decrease since last year but a 7% improvement over observed loading in 2002.
- The decrease in empty running has seen overall loading increase to 1.36 TEU per truck.
- Overall loading is almost 10% higher than in 2002.