



North Quay Truck Survey 2019

18th annual survey of container truck volumes and loading

FMC consulting November 2019

Survey objective and features

- Why: to monitor container truck:
- numbers
 - contribution to overall traffic volumes
 - types engaged in trade
 - loading (number of containers and size)
 - lifting capacity

- What: data collected over 24-hour period
- container truck data for two weeks
 - general traffic data for one week

- Where: two locations on perimeter of North Quay:
- Port Beach Road
 - Tydeman Road

When: Monday 9th to Sunday 22nd September 2019



Survey sites and video capture

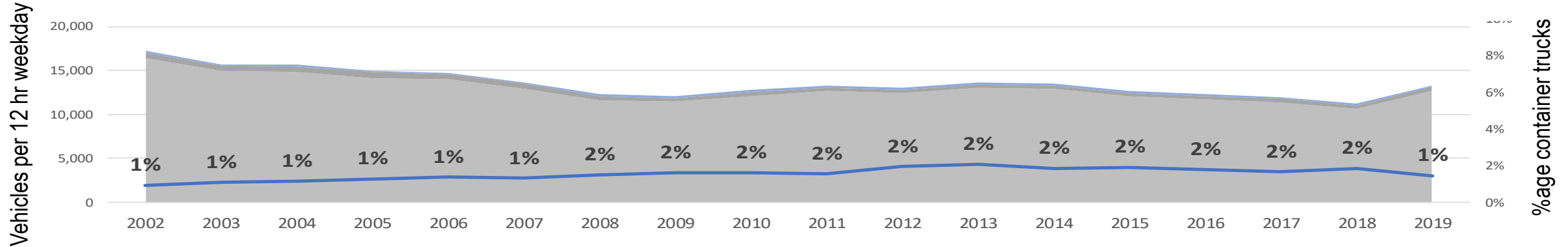
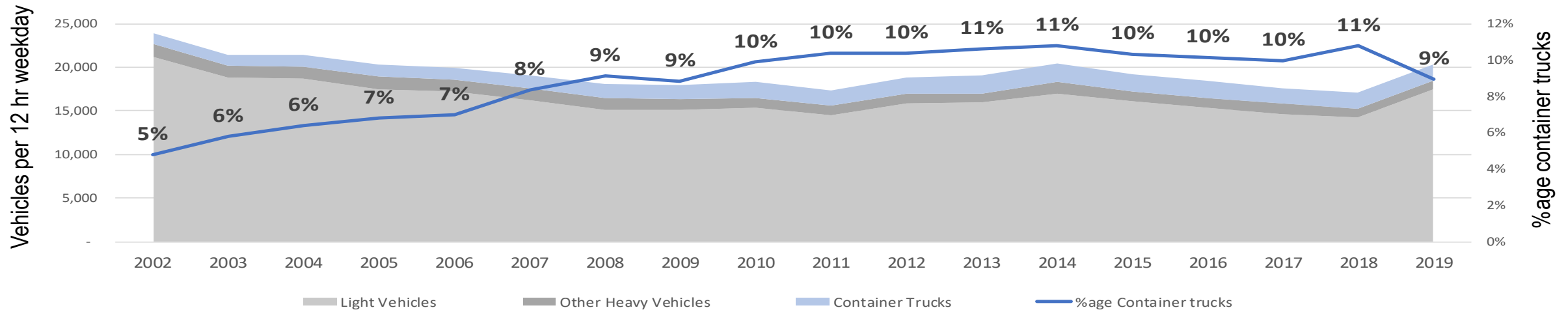


Port Beach Road



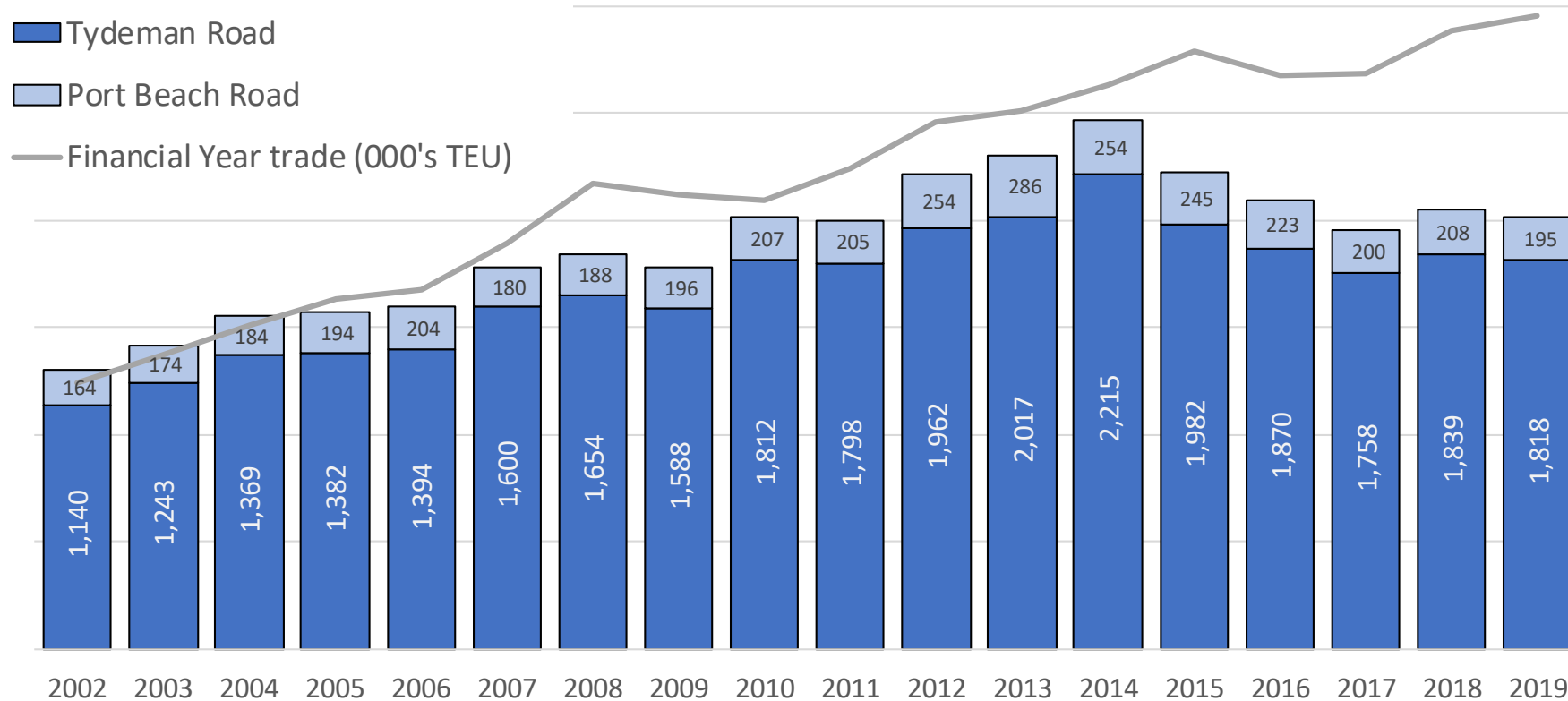
Tydeman Road

Container trucks in general traffic



Container traffic comprises 9% of 12hr traffic on Tydeman Road and 1% on Port Beach Road
 General traffic rose by 20% in the past year, almost all that growth was in cars and light vehicles.

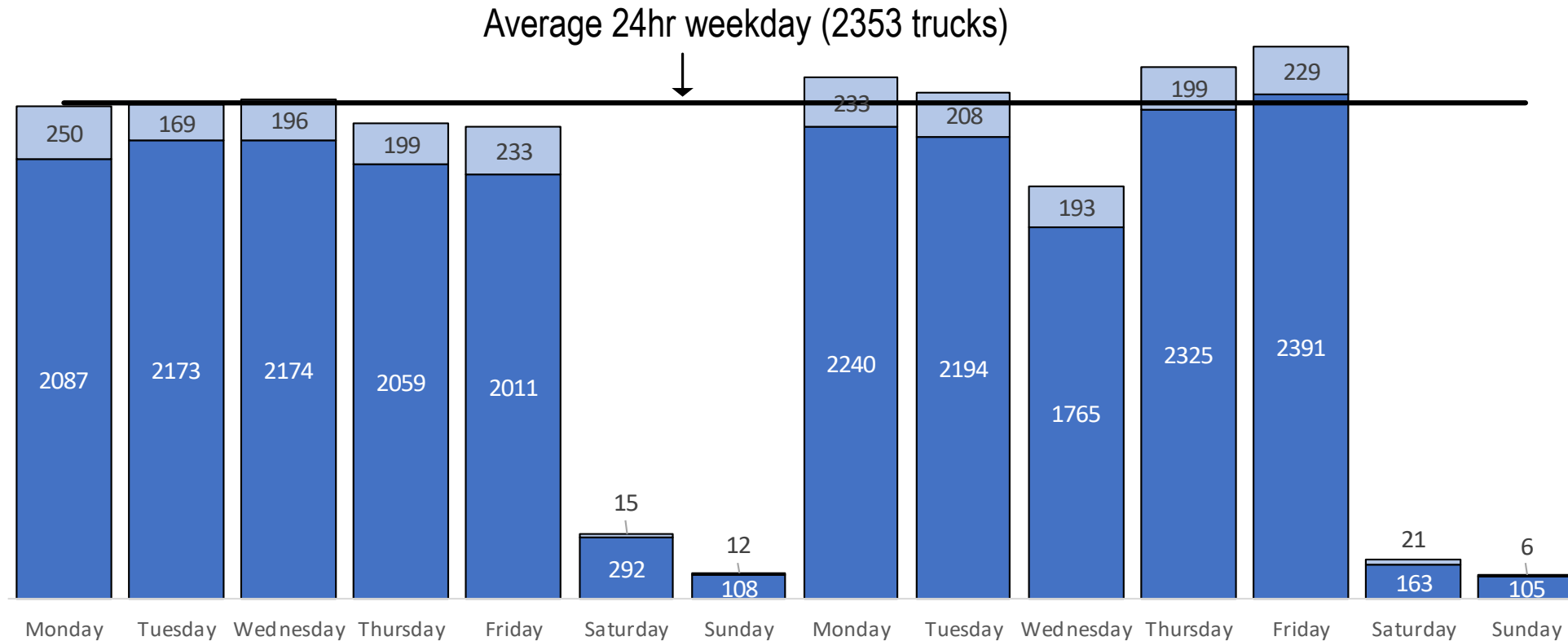
Container truck volumes since 2012 (12hr weekday)



Since 2014, growth in trade has outstripped container truck growth:

- Trade has increased by an average of 2% per annum
- Container truck numbers have declined by an average of 4% per annum

Container trucks per day



■ Tydeman Road
 ■ Port Beach Road
 — Average weekday

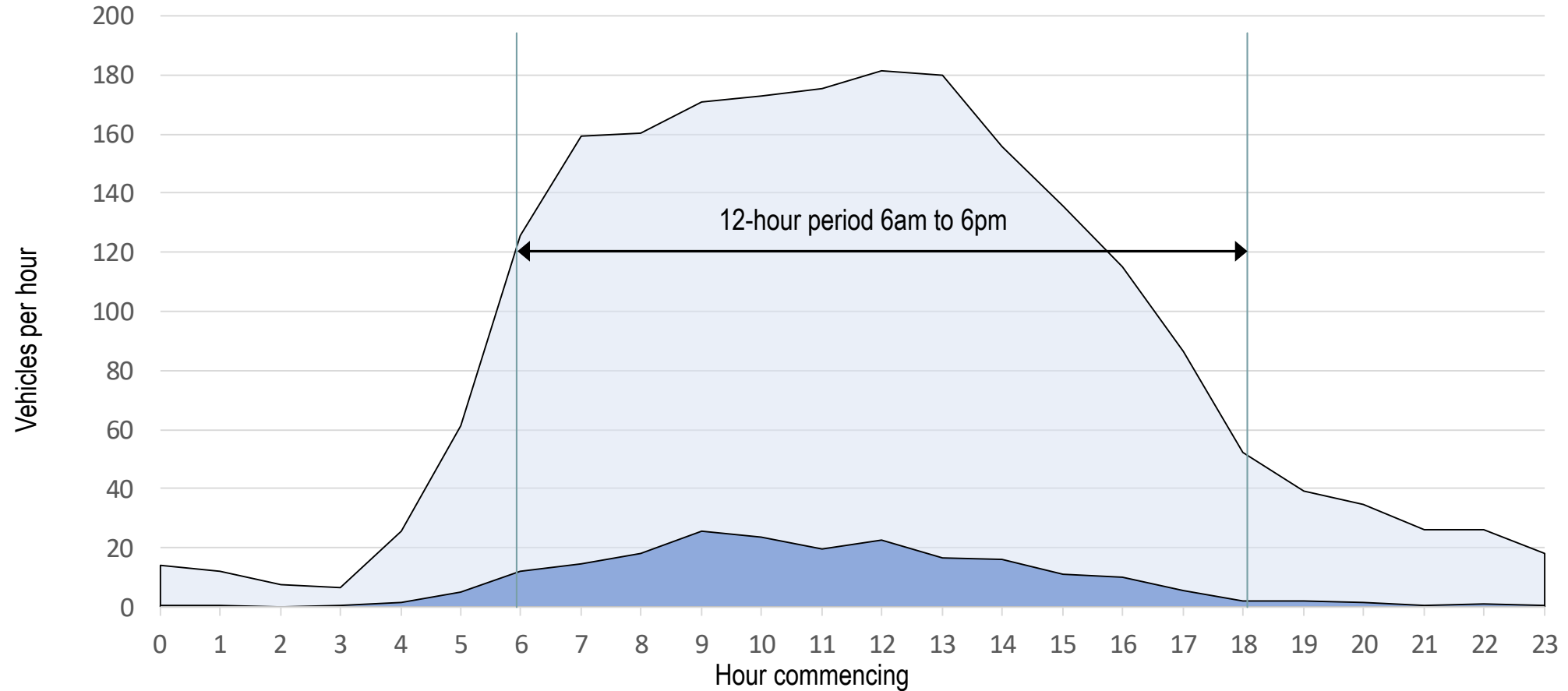
Week 1 (9th to 15th September)

Week 2 (16th to 22nd September)

Wednesday of 2nd week was very low. If excluded, average would still be down on 2018 figure

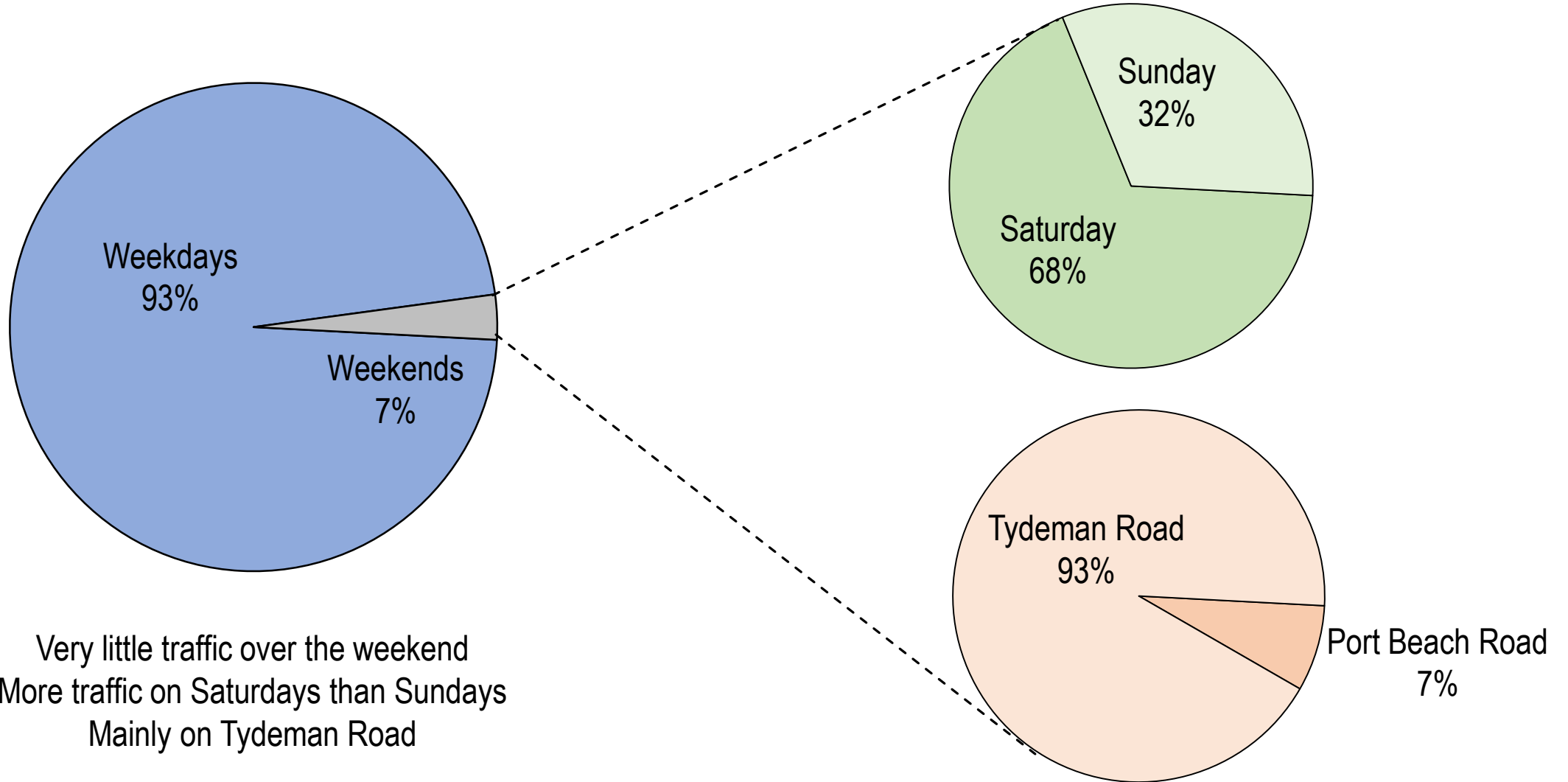
Thursday 19th saw freeway closure which affected arrival times but not overall volume

Container truck activity (average weekday)

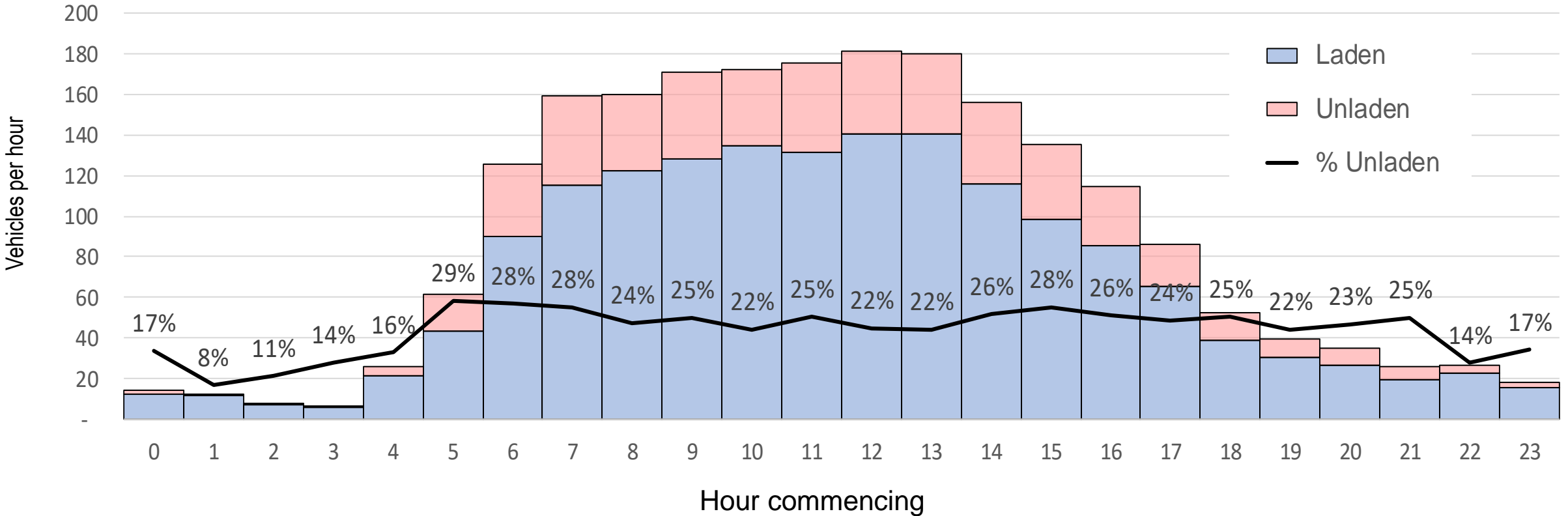


85% of trucks on Tydemans Road and 93% of trucks on Port Beach Road appear in the 12hrs 6am to 6pm

Container truck activity over the weekend

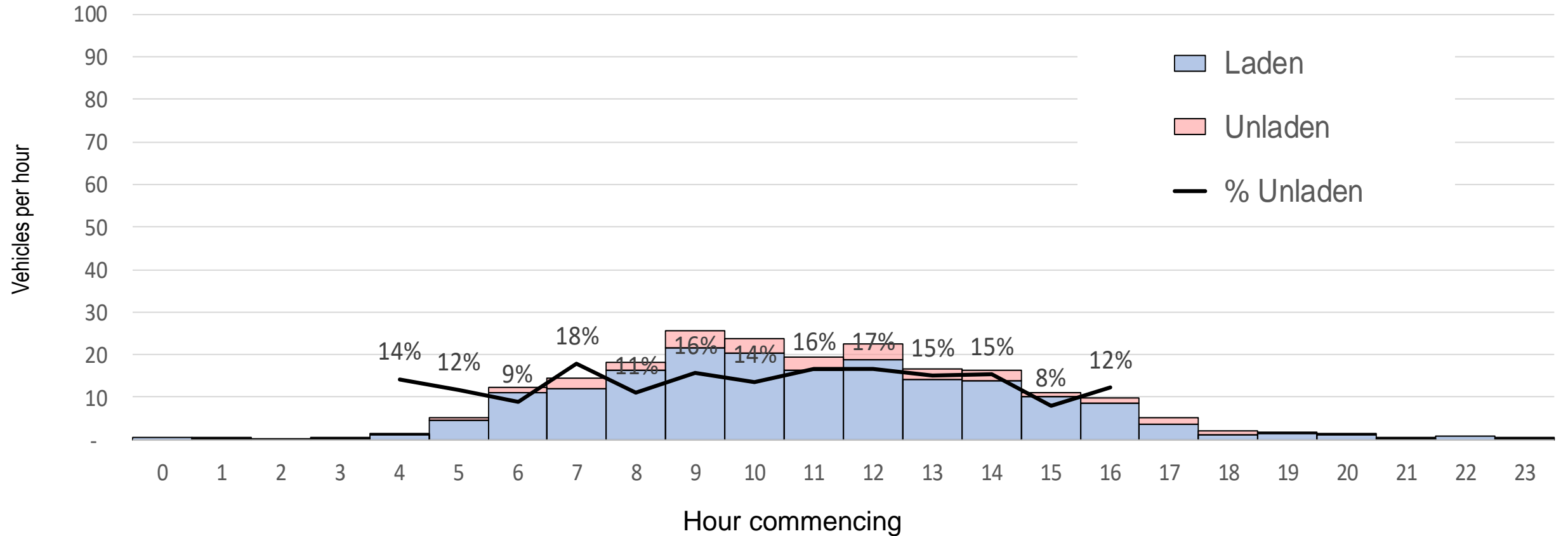


Tydeman Road unladen trucks



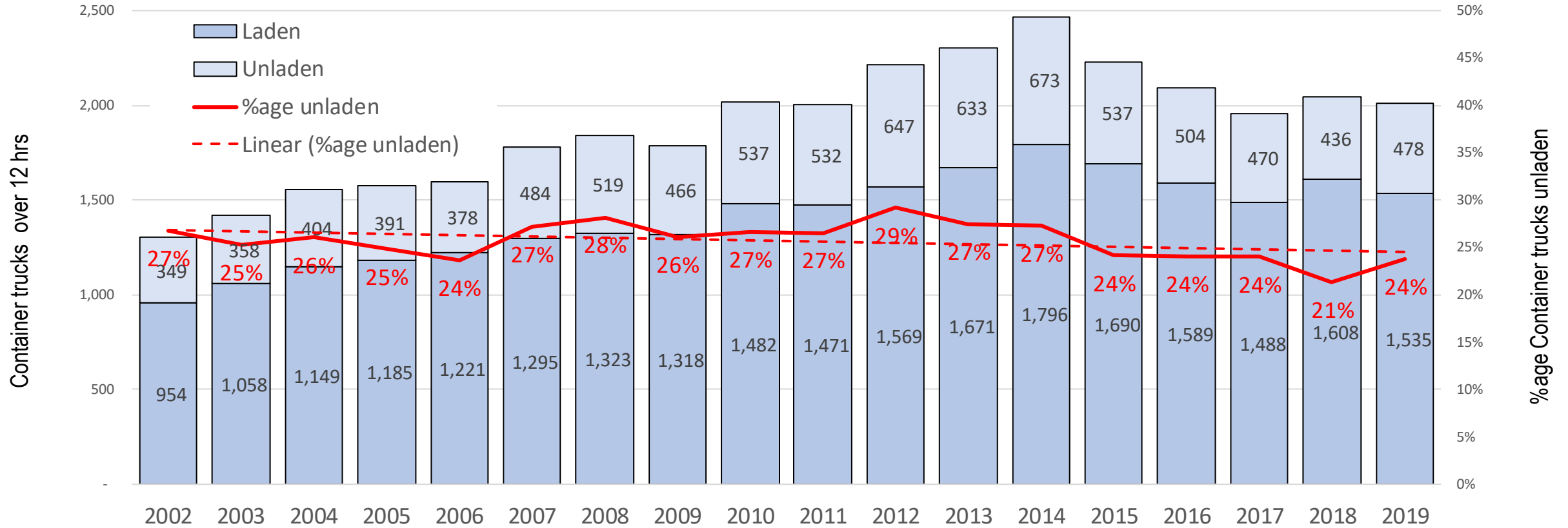
Over 24 hours, 24% of all container trucks on Tydeman Road travel unladen (26% inbound and 22% outbound)
 This equates to 520 trucks per average 24 hour weekday

Port Beach Road unladen trucks



Over 24 hours, 15% of all container trucks on Port Beach Road travel unladen (18% inbound and 12% outbound)
This equates to 32 trucks per average 24 hour weekday

Historic unladen truck numbers (12 hrs)



Despite an increase in %age unladen running in 2019, the proportion of trucks travelling unladen between 6am and 6pm continues to trend downwards

Container truck types



Class 11
Double road train
7+ axles in 5 or 6 groups



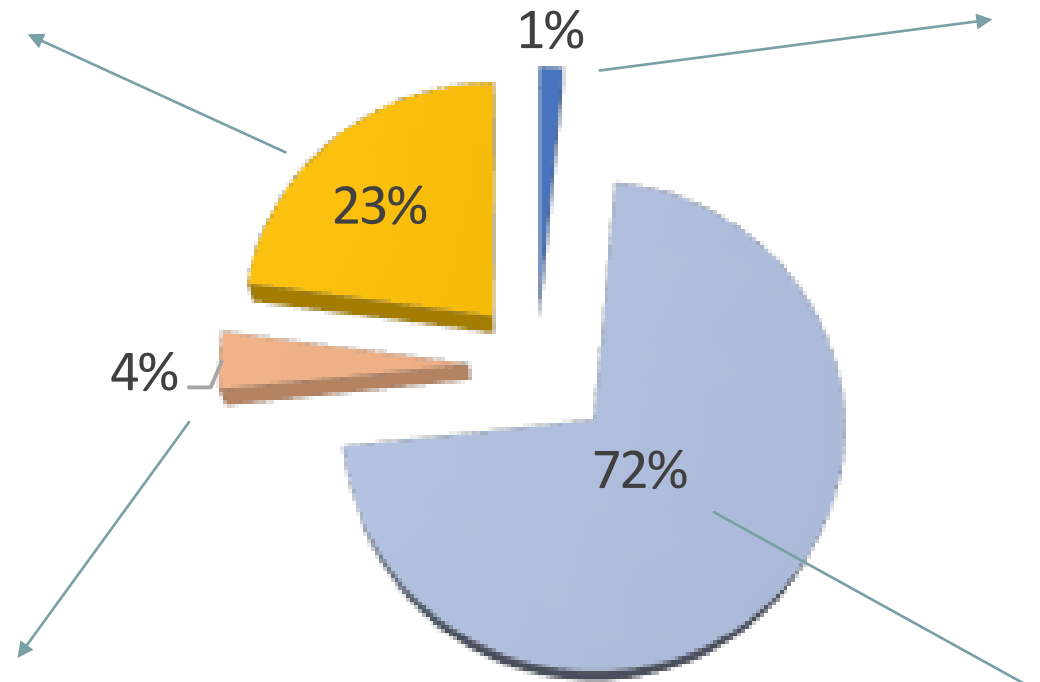
Class 8
5 axles 3+ groups



Class 10
B double
7+ axles in 4 groups



Class 9
6 axles in 3+ groups or
7+ axles in 3 groups



Classes 8 and 9 (73 % of all container trucks)



These trucks carry 66% of all TEU
On average, they carry:
1.35 TEU per truck
1.77 TEU per loaded truck

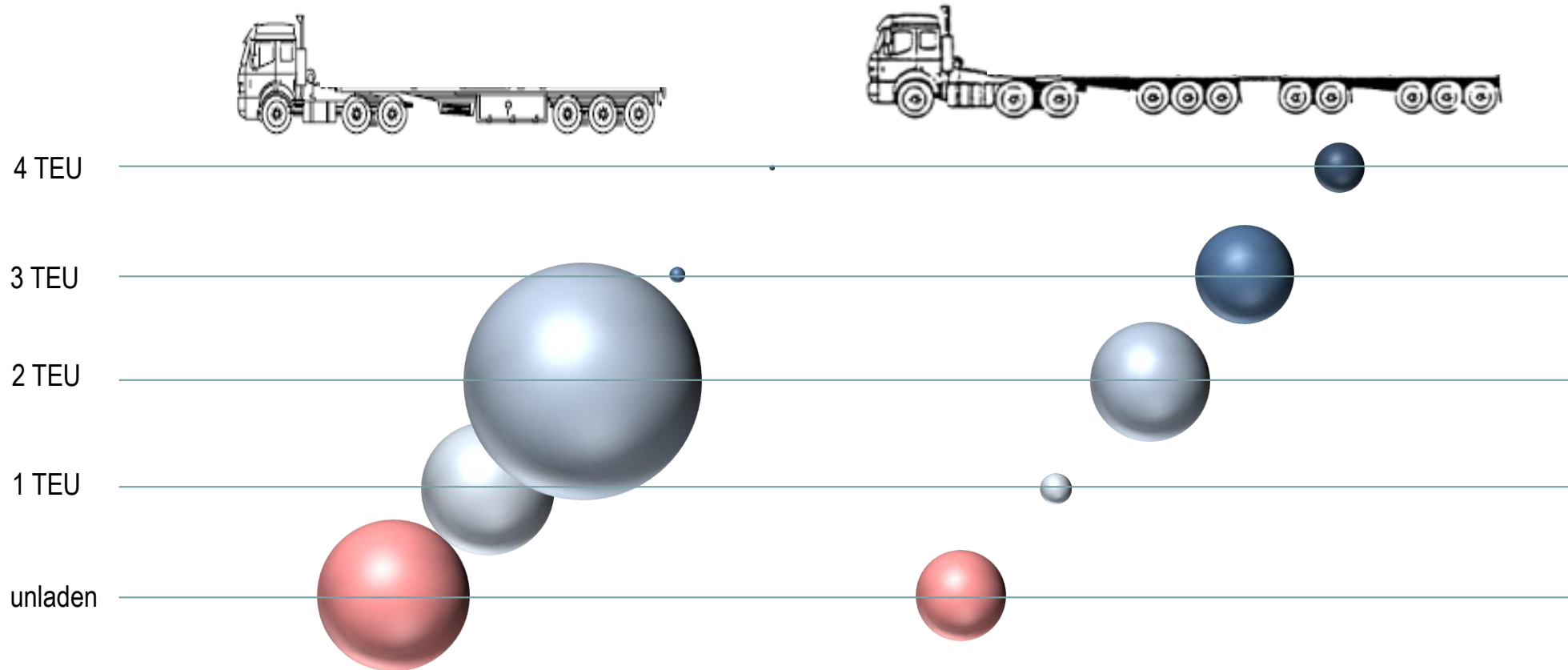
Classes 10 and 11 (27 % of all container trucks)

| | | | | |
|----------------|----------------|--------------|--------------|-------------|
| 23% Unladen | 3% 1 TEU | 40% 2 TEU | 27% 3 TEU | 7% 4 TEU |
|----------------|----------------|--------------|--------------|-------------|



These trucks carry 34% of all TEU
 On average, they carry:
 1.93 TEU per truck
 2.50 TEU per loaded truck

Overall truck fleet and TEU loading 2019



Trucks with lifting capacity

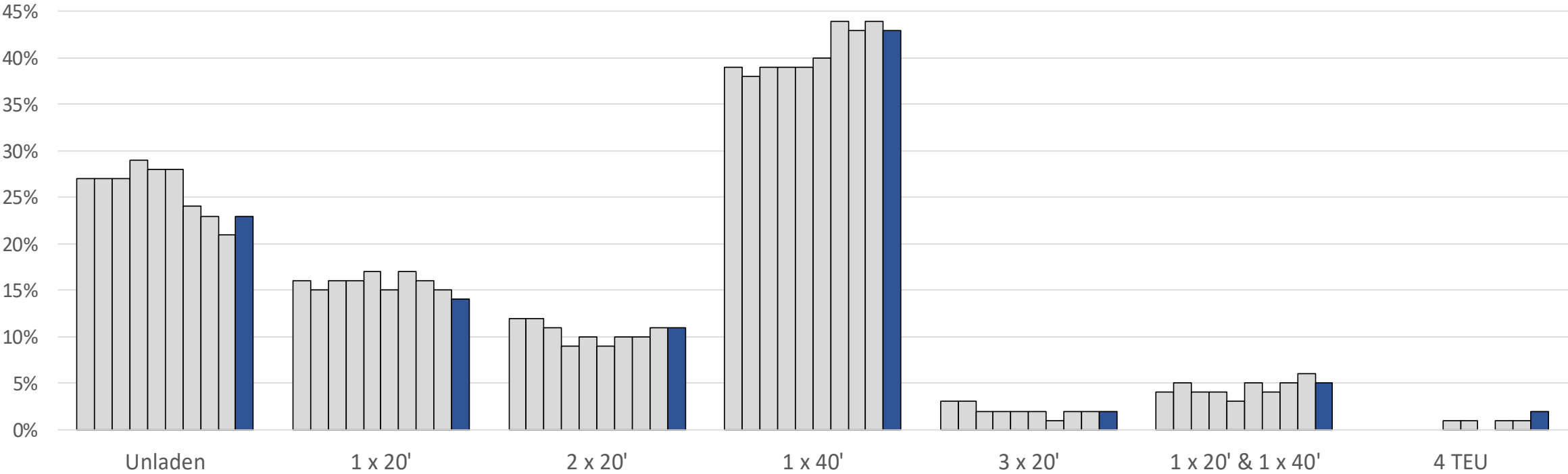


39% of all container trucks have lifting equipment

On Port Beach Road, 69% have lifting equipment
- more than 90% of these are semitrailers

On Tydeman Road, 36% have lifting equipment
- almost 95% of these are semitrailers
- the remainder form part of combination vehicles as pictured

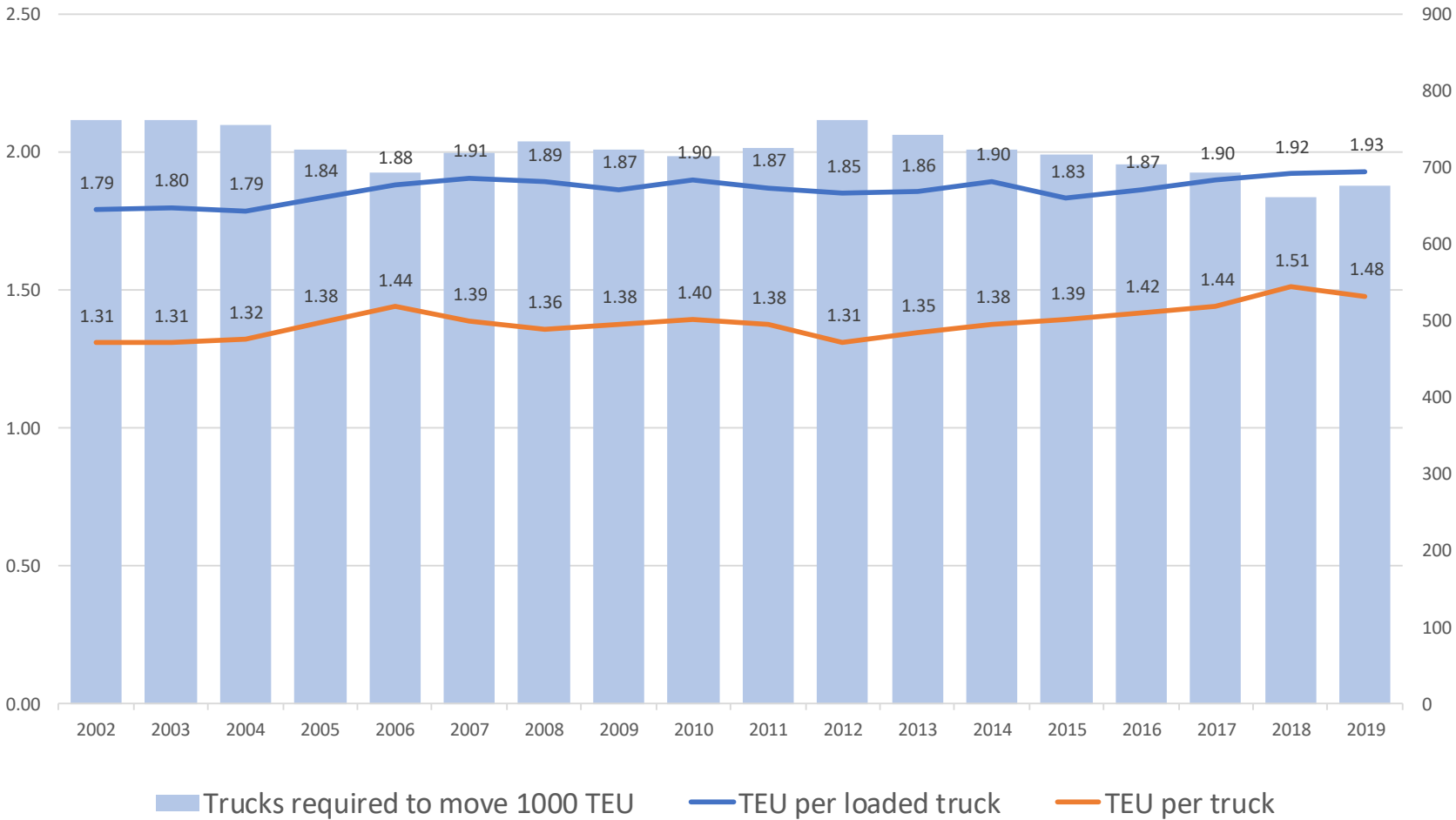
Truck loading and container size over past 10 years



Trade statistics indicate 49% of all TEU and 66% of all containers across the wharf were 40' containers in 2019

10 years ago, only 45% of all TEU and 62% of all containers were 40' containers

Changes in truck loading over time



Summary of findings

General Traffic:

- Major increase in general traffic
- Decrease in container truck numbers
- Increase in number of heavy vehicles other than container trucks

Empty Running:

- Increase in number and proportion of trucks travelling unladen
- Increase mainly in the outbound direction

Truck Loading:

- Overall truck loading down as a result of increased unladen travel
- Loading per truck increased, mainly due to increased number of trucks carrying 4 TEU

TEU Carried:

- Trade grew by 2.4% in the 2019 financial year
- Observed TEU fell by 3% – suggesting increased rail movements and/or unpack/pack activity in Rous Head

How is rail impacting container truck numbers?



The number of containers carried on rail has increased over time.

More containers on rail certainly means fewer containers on trucks near the port.

However, the impact is hard to quantify because of inland container park and triangulation activity.

Container trade freight in other vehicles



How do logistics activities in Rous Head impact container truck numbers?



- Containers are now being packed/unpacked at premises in Rous Head
- Those containers will thus not appear on trucks travelling to and from the port
- But the freight they contain must arrive or leave the port on some kind of truck
- The type and number of these trucks is unknown and unaccounted for in our survey
- It is therefore possible that the survey underestimates the impact of the container trade in the vicinity of the port
- This is confirmed by a fall in observed TEU despite increases in container trade.
- Container truck numbers have fallen since logistic hubs established at Rous Head