

Tread Softly



Timber Transport Conference, Dumfries

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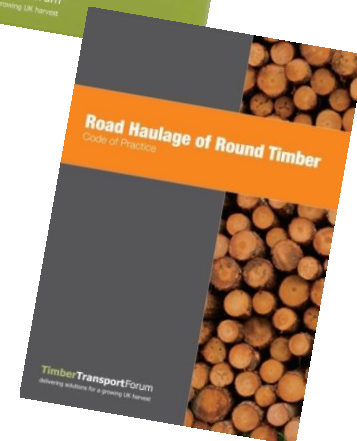
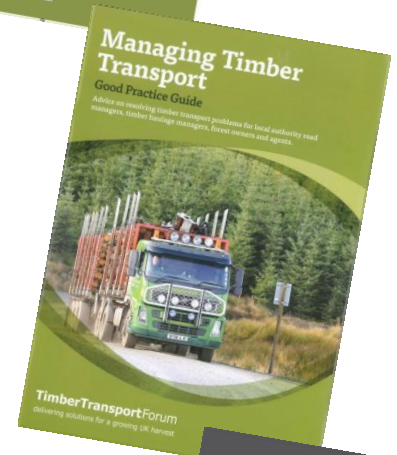
Background

- 2001 Evolution in truck design; EC COST report
- Adverse impact on weak roads
- Research: ROADEX, FERIC, etc
- 2013: TTF: Tighter budgets: Need for improved clarity and understanding



Tread Softly Document

- Builds on previous Forum publications
 - *Roundwood COP*
 - *Managing Timber Transport: BP Guide*
- Reflects the partnership approach
- Part of the process of improving quality and efficiency in the supply chain
- Not prescriptive: best available guidance



Choosing a Configuration

- Traditionally made by haulier on basis of lowest cost tendering
- Vehicle choice is a compromise
- Need to factor in road damage
- A more holistic tendering approach needed



Choosing to reduce road damage

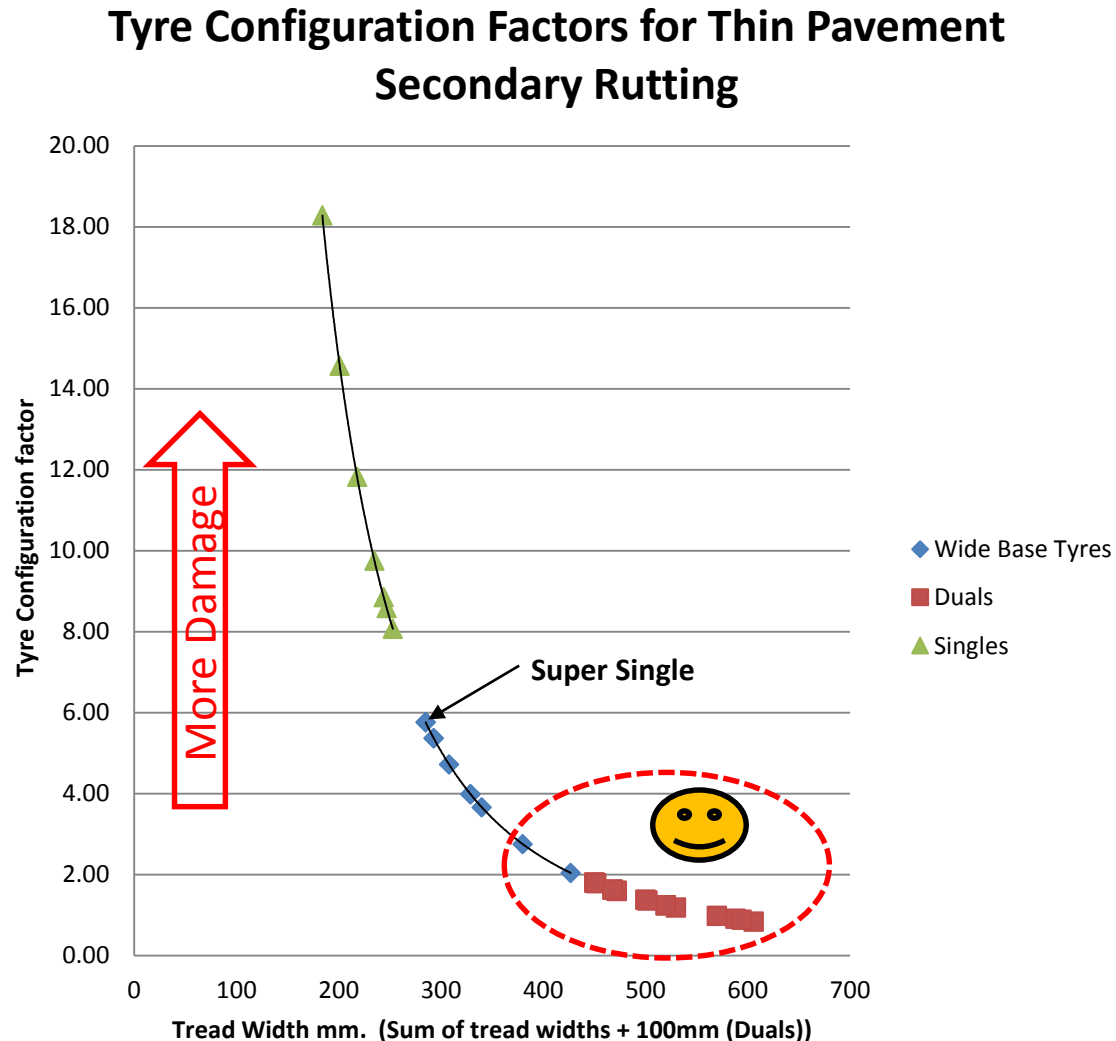
- **Edge damage:**
 - Improve articulation: Wagon and Drag vs Artic



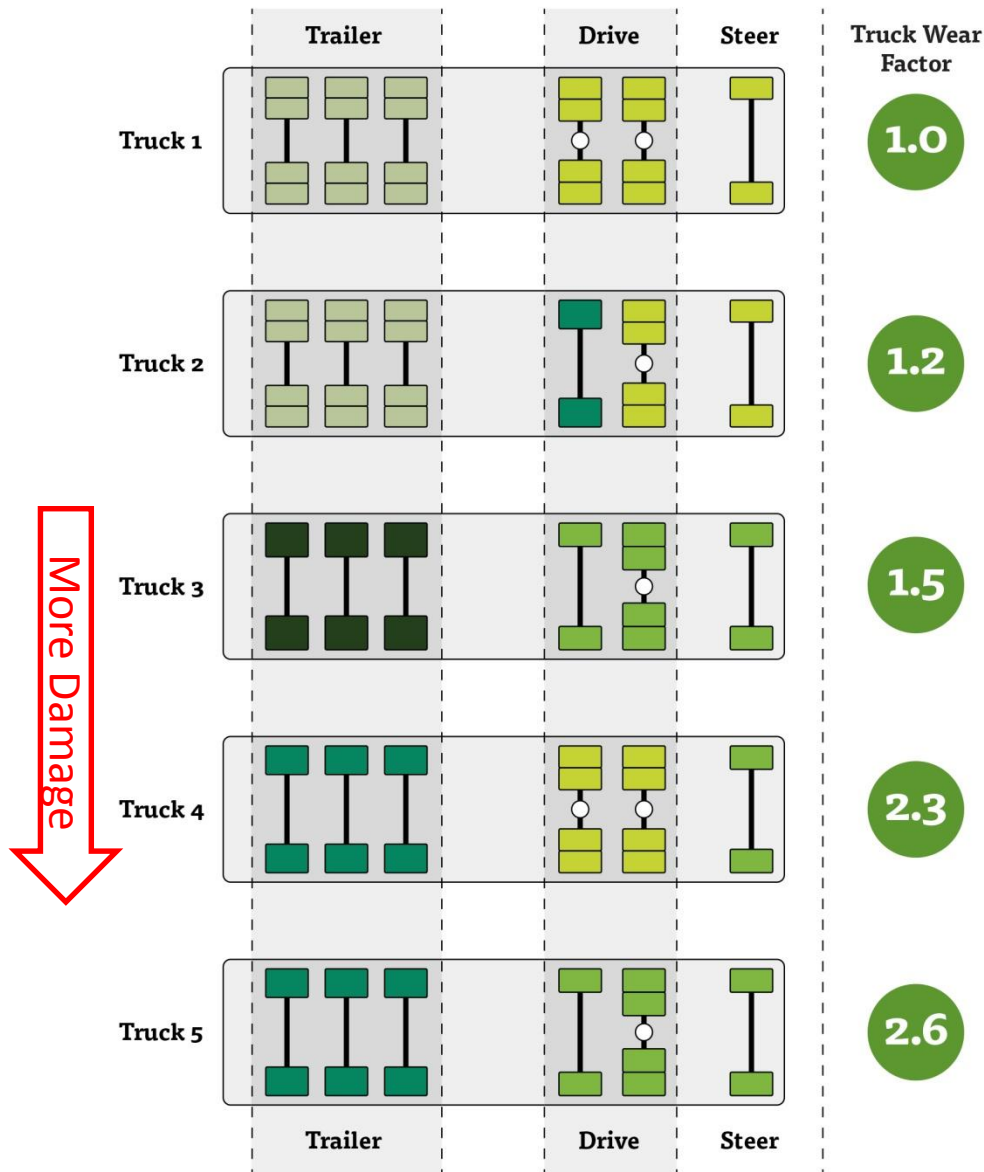
- **Pavement and subgrade damage:**
 - Use more wheels bigger tyres

How damaging is one truck compared to another?

- Big footprint= good
- But...pavement response highly complex
- Tread Softly has used a novel technique to get an answer



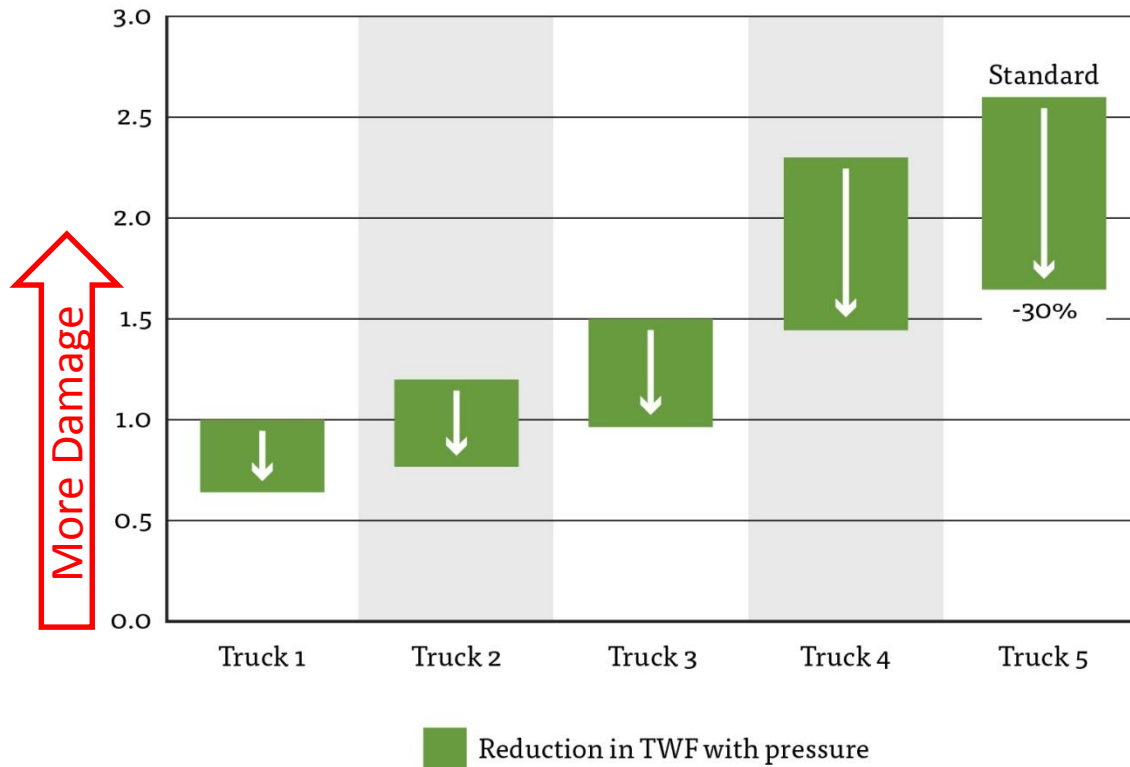
Comparing some alternatives



- These are only some variants
- Truck 1 could be improved upon
- TWF is indicative and relative, not absolute

Tyre pressure control systems

Comparing these trucks with TPCS added, and pressures reduced by 30%



Decision Matrix

Road Type	Road Strength		
	Weak	Medium	Strong
Forest Roads	Wagon and drag or artic with: - Wider single on steer axle - Double drive axles with TPC - Twin wheels/maxis with TPC on trailer	Artic with: - Single drive axle and tag with TPC - Maxis with TPC on trailer	Artic with: - Single drive axle and tag - Super singles on trailer
Standard 2 lane public road (5.5m or more)	Wagon and drag or artic with: - Double drive axles with TPC - Twin wheels/maxis with TPC on trailer	Artic with: - Single drive axle and tag with TPC - Super singles with TPC on trailer	Artic with: - Single drive axle and tag - Super singles on trailer
Standard 3.3m single track/ narrow two lane public road	Wagon and drag or artic with: - Double drive axles with TPC - Twin wheels/maxis with TPC on trailer	Wagon and drag with: - Maxis on trailer or Artic with: - Single drive axle and tag with TPC - Maxis with TPC on trailer	Artic with: - Single drive axle and tag - Super singles on trailer
Narrow single track public road (<3.3m)	Wagon and drag with: - Double drive axles with TPC - Twin wheels with TPC on trailer	Wagon and drag with: Maxis with TPC on trailer	Wagon and drag

Notes:

1. TPC = Tyre Pressure Control. Where a trailer has TPC it is assumed the axles on the tractor unit (drive and tag axles), will be fitted with TPC

2. Where artic units are specified above, they can always be replaced by an equivalent wagon and drag.

3. Super single tyres can be replaced by maxi tyres on the trailer, and either can be replaced by twin wheels.

Among the other factors to be weighed...

- Standard of driving and training
- Presence/absence of:
 - Fleet management systems
 - GPS location and other telematics
- Record of overloading/convoying
- Cost, availability.....etc



Applying Tread Softly principles

- Some Councils have been specifying vehicle configurations and TPCS for several years
- Timber Transport Management Plans (TTMP's) on difficult public roads can prevent Exclusion
- Working well but need to engage haulier in the process



Haulier Quality Statement

- Driving the information/responsibility down the chain to the haulier
- Simple to draw up
- Opportunity for haulier to show how they will deliver the required standard

SETTING #	SETTING DESCRIPTION	Steer PSI	Drive PSI	Trailer PSI	MAX Mph	MAX TIME
1	Highway Empty		65	65	none	NO LIMIT
2	Off-Highway Empty		60	60	50	NO LIMIT
3	Push Road Loaded		45	65	20	NO LIMIT
4	Secondary Loaded		65	85	30	NO LIMIT
5	Main Line Loaded		70	100	50	NO LIMIT
6	Highway Loaded		80	130	none	NO LIMIT
7	Emergency Traction		35	65		
8	Tractor Only-Bobtail		50			



Summary

- Tread Softly sets out evolving good practice
- An industry prepared to invest and deliver
- Low Impact trucks form only part of the timber haulage fleet; their use should be managed and targeted



A large red truck is driving down a narrow street lined with stone buildings. The truck's cargo area is completely filled with a massive stack of cut logs, which are piled high and appear to be secured with straps. The logs are cut into uniform lengths and are stacked in neat rows, filling the entire width and height of the truck's load area. The street is very narrow, with the stone walls of the buildings visible on both sides. The sky is overcast. The truck has a red frame with white text and a logo on the back.

To the many who assisted with
the preparation and review of
Tread Softly:

Thank you!

This is a Road Friendly Vehicle with TYRE PRESSURE CONTROL

DENNISON