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SCS

Speed Check Services

Safer, smoother traffic flows

Reduction in CO2 Emissions with SPECS Average Speed Enforcement



SPECS3

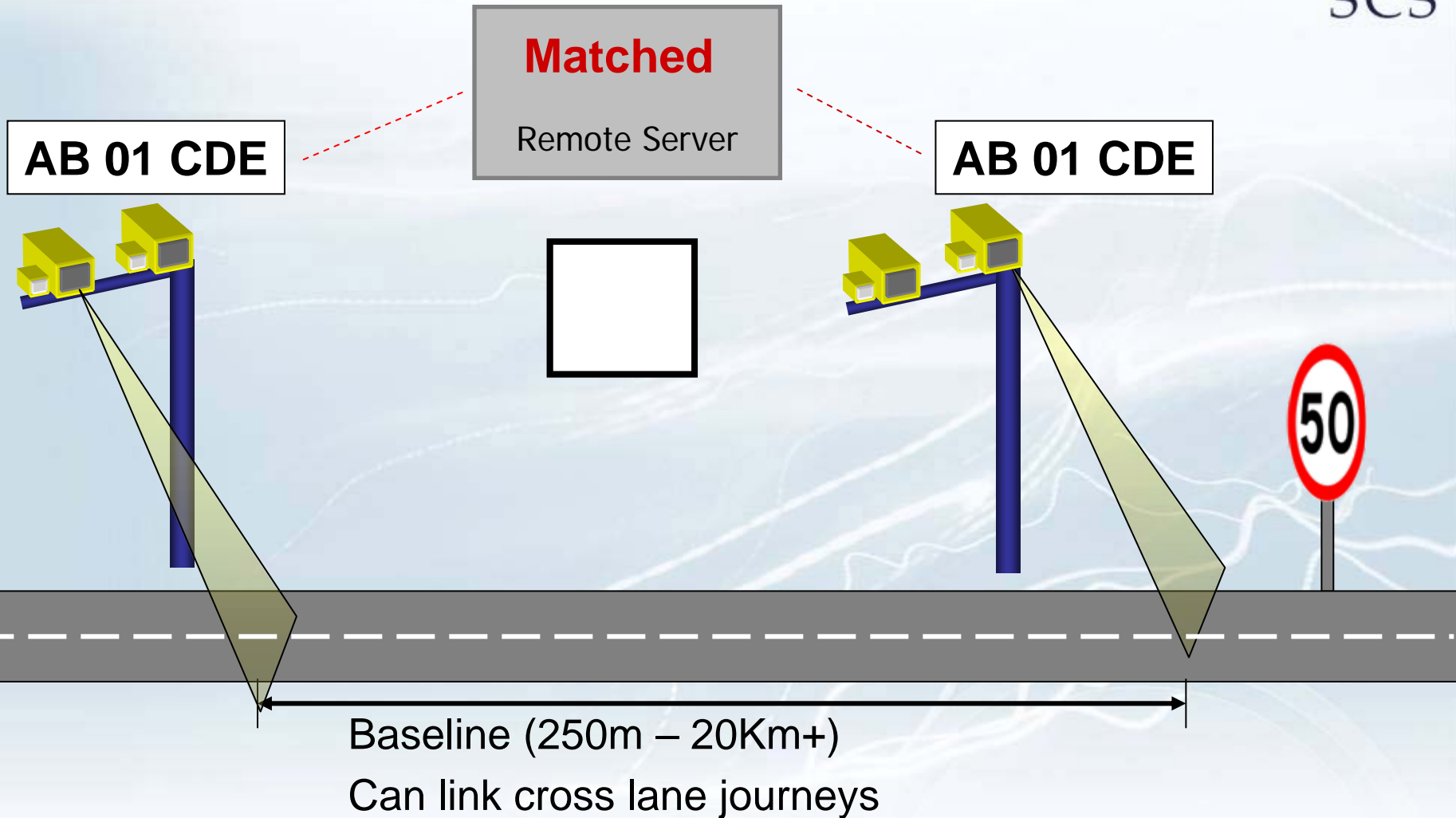
Networked average speed enforcement solutions

Overview

1. What is SPECS?
2. The 'known' SPECS benefits
3. Climate change & the environment
4. Changing driver behaviour
5. Fuel consumption and CO₂ emissions
6. True savings likely to be higher
7. SPECS³



How does SPECS work?



The 'known' SPECS Benefits

- ④ Reduction in deaths and serious injuries – Typically 60%.
- ④ Safer environment for road workers – Over 200 roadworks installations.
- ④ Compliance throughout the 'zone' – Not just at camera locations.
- ④ Smoother traffic flows – Reduction in congestion.
- ④ High level of driver compliance – Fewer tickets issued.
- ④ Fewer tickets issued – Lower enforcement costs.
- ④ Less 'revenue' raised – Greater public acceptance.



Climate Change & the Environment



- ❶ Passenger Cars are responsible for 13% of UK CO₂ emissions.
- ❷ Other sectors are reducing CO₂ emissions, transport is still rising.
- ❸ UK pledged to reduce CO₂ emissions by 60% by 2050.
- ❹ Road transport could double by 2050.
- ❺ Most current alternative fuels have CO₂ emissions upstream.
- ❻ Policy should encourage reduction in fuel use.

(The King Review of low-carbon cars, 2008)



Changing Driver behaviour

Public Information

– 10 tips to help Protect our environment by using fuel efficiently

- Regular servicing & oil level checks
- Check tyre pressure monthly
- Remove unnecessary weight
- Close your windows, especially at speed & remove empty roof racks
- Don't use air-con. unnecessarily
- Start engine just before driving off/ turn off engine when stationary
- Drive smoothly at reasonable speeds
- Change up gears as early as possible
- Try to anticipate traffic flow
- Consider car sharing



Changing Driver behaviour

Education



- Fleet & Driver training
 - Enhanced planning – smoother driving
 - Decelerate Smoothly – use engine braking
 - Use of engine torque – low rpm
 - Compliance with Speed limits – cruise control



Dashboard

- Fuel consumption read-outs
- Speed limit warnings



Costs

- Congestion Charging
- VED Tax bands
- Fuel Tax



Speed Limits and Enforcement

Fuel consumption & CO₂

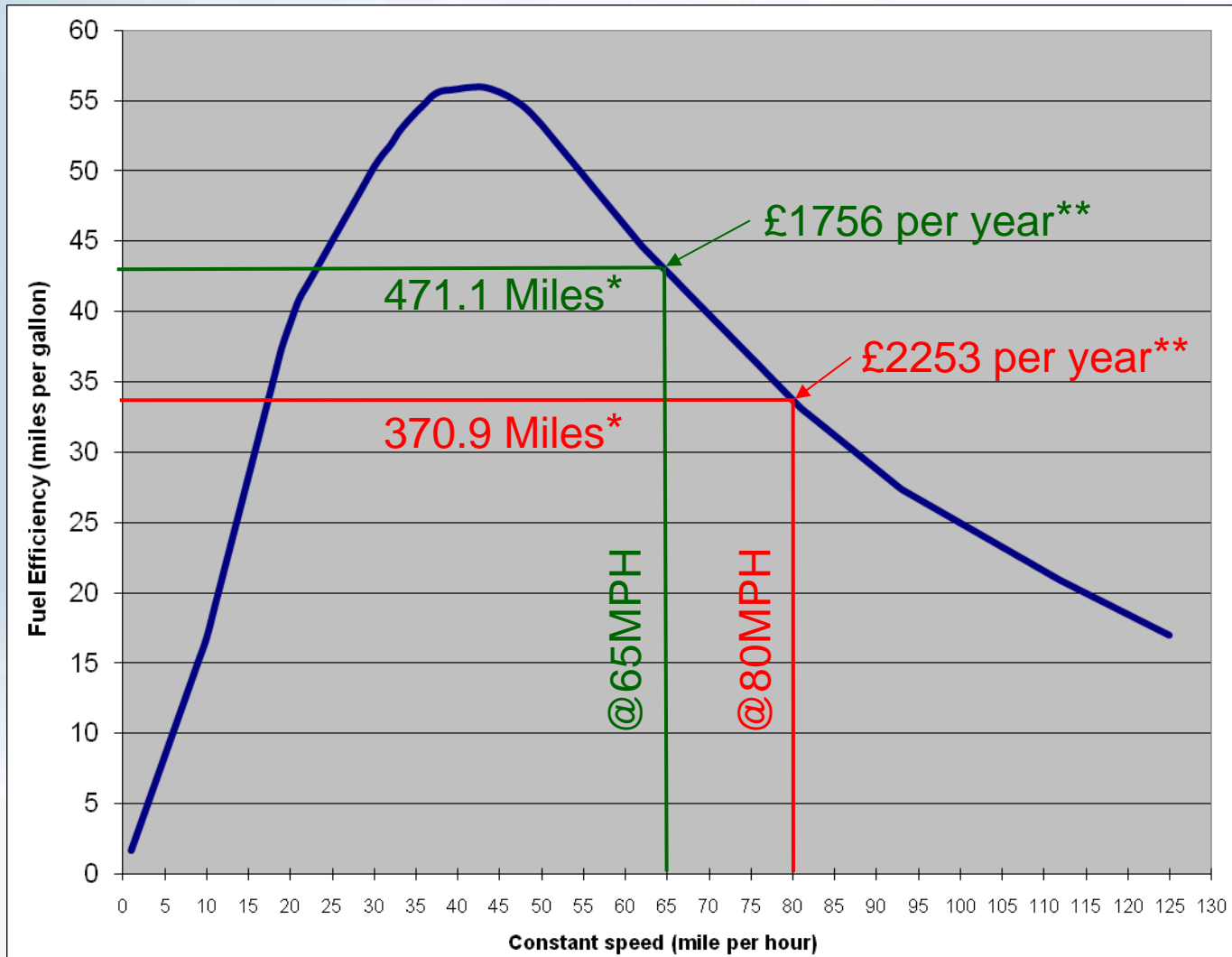
- ① If burnt efficiently in stoichiometric conditions, burning 1 litre of unleaded petrol produces:

❖ **2.36kg CO₂**

- ① This equates to **10.7kg** CO₂ per gallon.

Typical Fuel Economy

- Mid-sized Hatchback (eg. 1.6 Golf) at different constant speeds.



* Per tank
 =
 11 Gallons
 (50 Litres)
 =
 £55.45

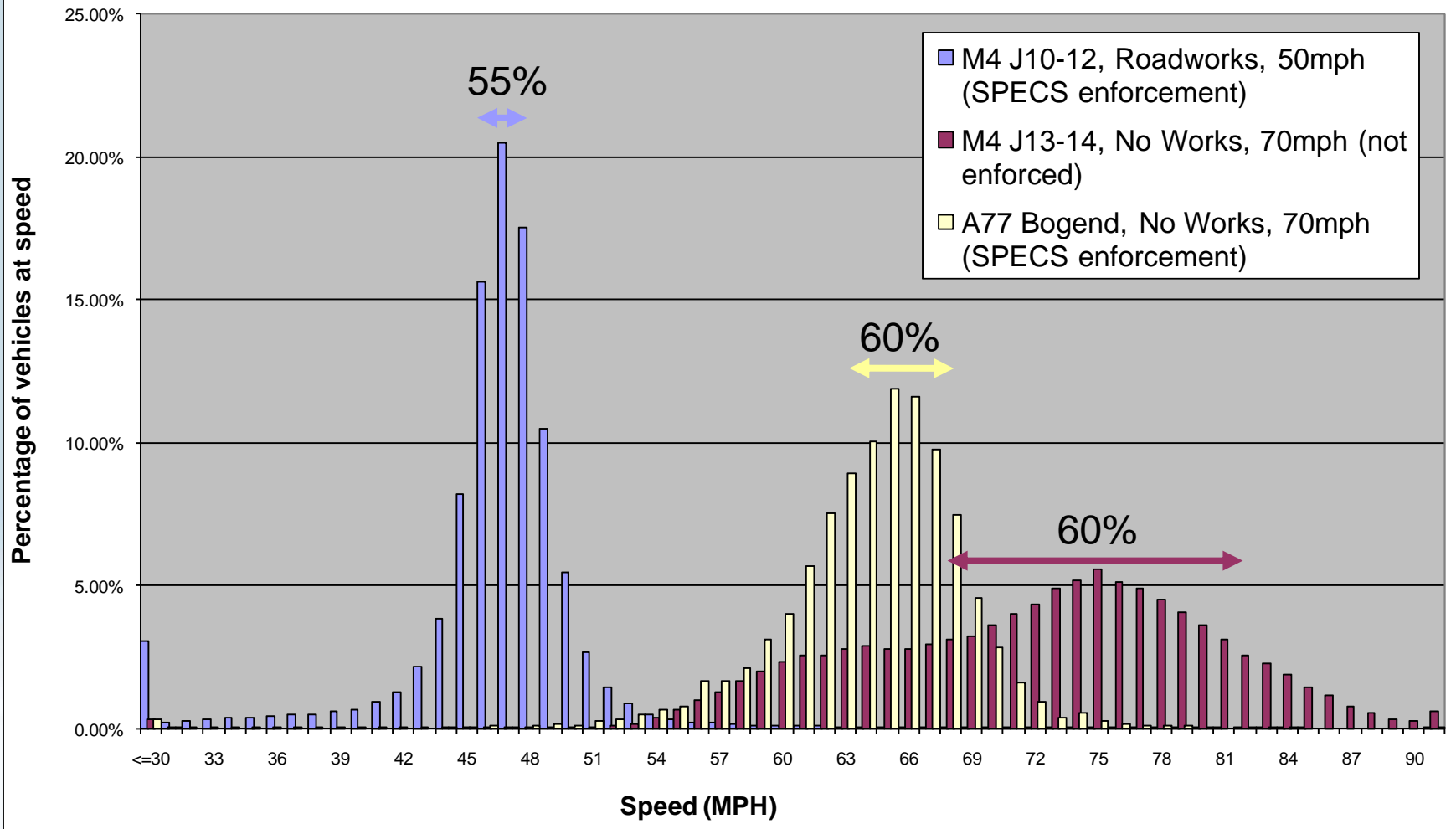
** Based on
 15,000 miles
 per year.

Cost saving:
 £497

CO₂ Saving:
 1449Kg

Driver behaviour with and without speed enforcement

Speed Profiles - All Vehicle types



Fuel Consumption and CO2 results

- Based on the typical car fuel consumption and the speed profiles for different speed limits and enforcement regimes. With AADT of 73,435 (excluding HGVS)

	Non-enforced 70mph Limit	SPECS Enforced 70mph limit	SPECS Enforced 50mph limit
Average Fuel Consumption (MPG)	38.48	43.35	54.40
Fuel saved annually (gallons per mile)	0.00	79,190.47	206,302.64
CO2 Emissions (Kg/M)	0.279	0.248	0.197
Annual CO2 Emissions (Tonnes per mile)	7,484.21	6,636.87	5,276.77
Annual CO2 Reduction (Tonnes per mile)	0.00	847.34	2,207.44
Saving	0%	11%	29%

True savings likely to be higher

- ❶ MIDAS data on unenforced motorway hides variation.
- ❷ Wide speed distribution leads to more variation in individual speeds.
- ❸ Drivers within SPECS enforced areas tend to drive smoothly and consistently at the speed limit.
- ❹ Reduced congestion, as well as reduced speeding.
- ❺ Less stressful driving environment.
- ❻ Driver financial benefits - reduced vehicle wear... on top of the increased fuel economy.

SPECS³ has arrived...



SPECS³ uses the principles of SPECS with improved functionality:

- ① Every camera is an entry **and** an exit camera.
- ① Journeys calculated between **all** active cameras.
- ① Rear-facing cameras can be used.
- ① All entry lanes **and** all exit lanes can be monitored.
- ① Dedicated fibre optic is not necessary.
- ① Public telecoms networks used:
 - ISDN
 - ADSL (and SDSL)
 - GPRS
 - 3G
 - LANS/WANS



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www.speedcheck.co.uk



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