



Department
for Transport

DfT Acoustic Camera Research

TFSL-04





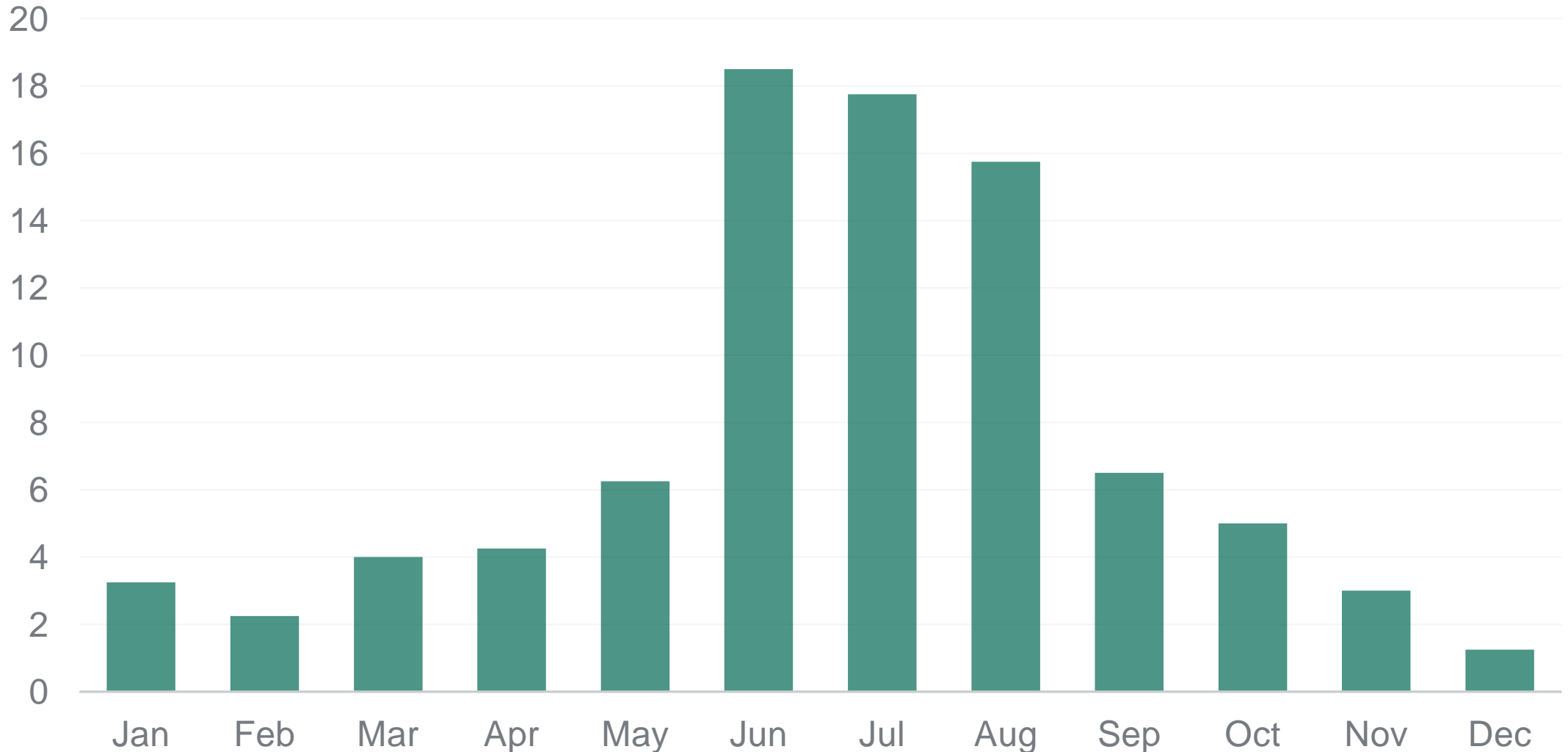
International Vehicle Standards

- Exhaust and non-exhaust emissions
- Noise and audible warning
- Battery state of health





Average no. noise complaints (2018 – 2021YTD)





- ▶ Two phase research project commissioned in 2018, conducted by Atkins Jacobs Joint Venture.
- ▶ Phase one - Desktop review of existing technologies and practices.
- ▶ Phase two - Roadside trials of technologies identified in phase one.



Phase One - Outcomes

- ▶ Excessive vehicle noise is a significant issue, and is not limited to rural areas.
- ▶ In the UK, roadside enforcement is complicated and time consuming.
- ▶ Softer enforcement measures including awareness and signage have been shown to be ineffective.



Phase Two - Setup

- Integrated ANPR and video camera
- Class 1 sound level meter
- Speed radar
- Weather station





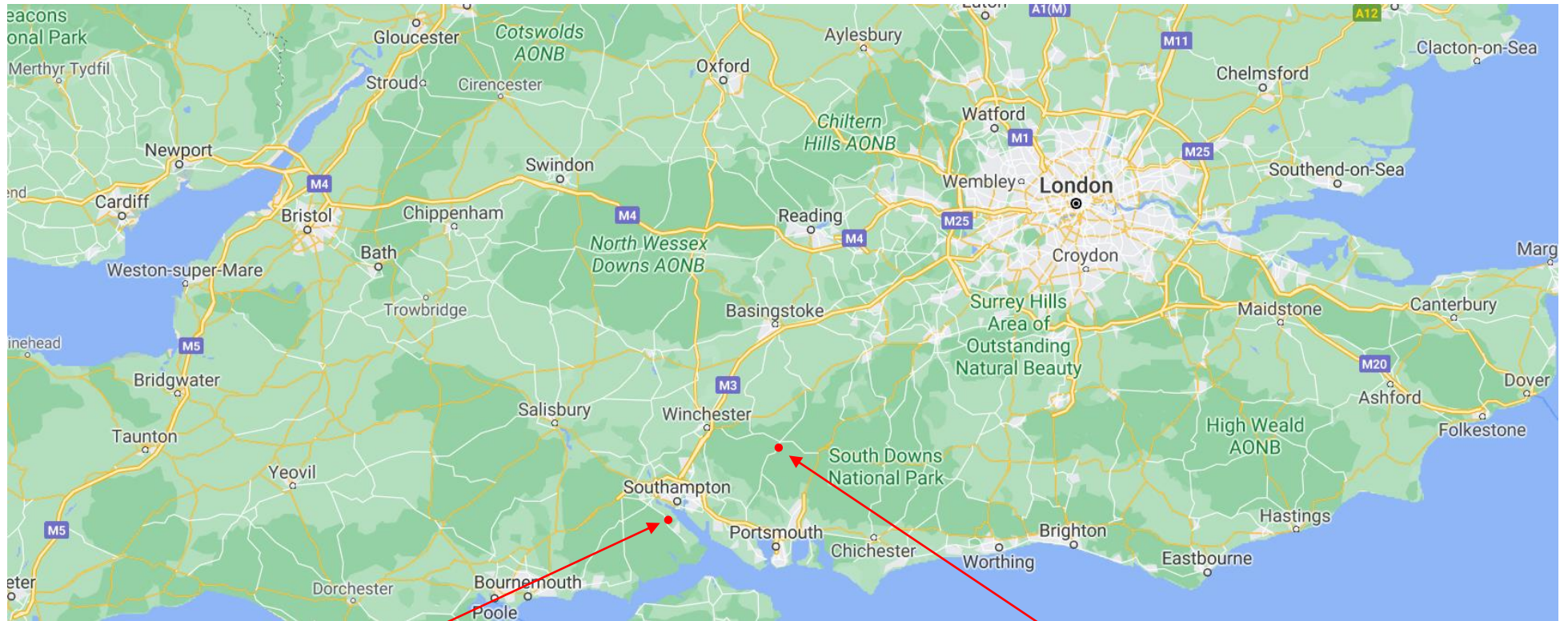
Phase Two – Site Selection

- ▶ Two sites, both semi-rural environment.
- ▶ 50 mph (80 km/h) speed limit.
- ▶ Popular for car and motorcycle enthusiasts.





Phase Two – Site Location



Site 1

Site 2





Phase 2 – Data Collection

Sound
Pressure
Level

ANPR Data

Meteorological
Data

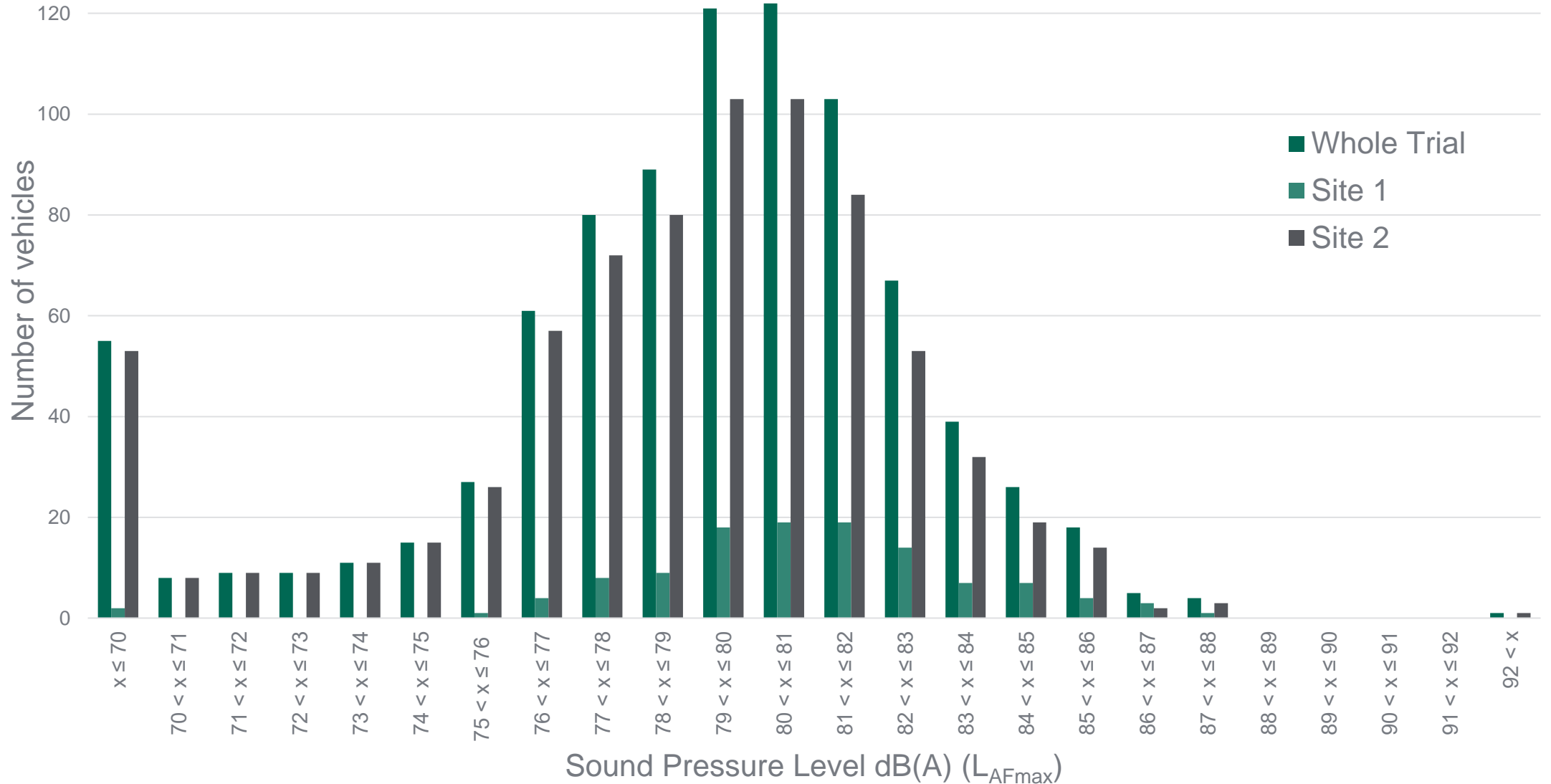
Vehicle Speed

Criteria for further analysis:

- 10 second period where only one vehicle has passed.
- Recorded maximum sound level exceeded 75 dB(A).
- Matched with DVLA data.

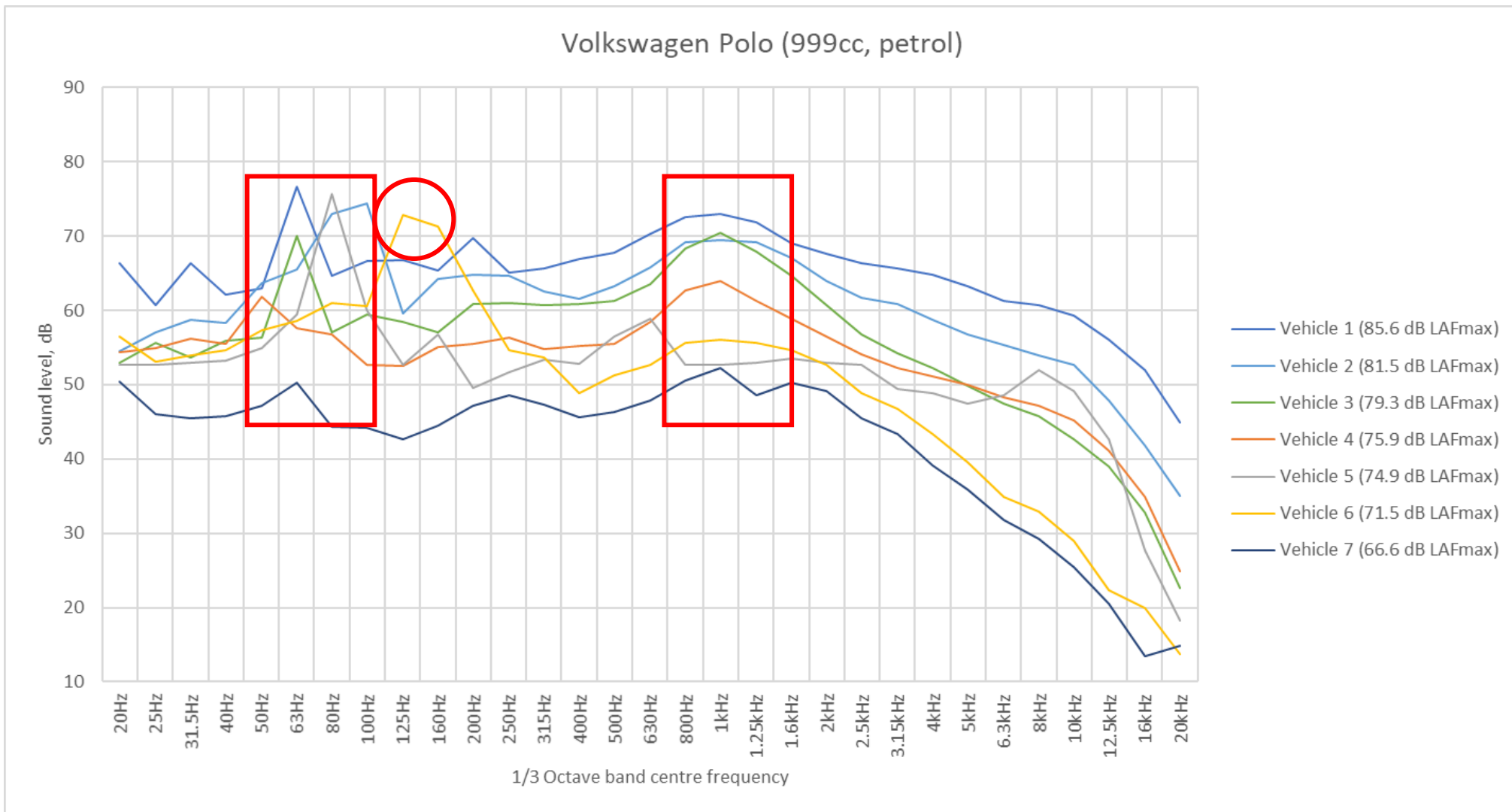


Phase 2 - Results





Phase 2 - Comparisons





- ▶ In certain circumstances, the prototype was able to assign measured pass-by noise levels with registration data.
- ▶ Ability of prototype to assign noise levels in complex traffic scenarios is limited.
- ▶ Dedicated software would reduce post processing time and make results easier to interpret.
- ▶ Final report webpage:
<https://www.gov.uk/government/publications/roadside-vehicle-noise-measurement-study-enforcement-and-technology>



- ▶ Investigate merits of using one or more blanket noise thresholds.
- ▶ Test a range of the latest noise cameras and develop an installation and user guide.
- ▶ Run further roadside trials in collaboration with the police and local authorities.



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Thank you for listening

