



Headline Sponsors



National Blue Light Users Conference

Barry Burnett

Lead Driving Instructor

West Midlands Fire Service

 **Travis Perkins Group**

Session Sponsor

Brigade Response Vehicles

Barry Burnett
Lead Driving Instructor

What Vehicle?

- Cost effective.
- Cutting edge technology.
- Manoeuvrable.

Brigade Response Vehicles



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Initial Stages

- Smaller appliance
- Less crew
- Small fires



Brigade Response Vehicles

- Partnership with Jaguar Land Rover.
- Vehicle category – Cat 'B'.
- Vehicle type – size (footprint), weight, carrying capacity, extinguishing medium, 4x4 option.

Brigade Response Vehicles



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Brigade Response Vehicles



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Brigade Response Vehicles

- Research – Evidence led approach
- End-user group meetings with Transport Engineering
- Minimum levels of equipment
- Stowage
- Extinguishing medium
- Water tank and pump

Brigade Response Vehicles

- Load carrying capacity.
- Toyota- only manufacturer to allow upgraded suspension to 3.5 tonne max gross vehicle weight.
- No brake upgrade for extra weight capacity.

Brigade Response Vehicles

- Vehicle testing.
- On private land.
- Loaded to maximum for Category 'B' 3.5t.
- Brake stop and fade test carried out to JCDD specification.
- Stability testing.

Brigade Response Vehicles

- Vehicle weight reduced to max gvw, 3.0t
- Vehicle fitted with temporary emergency response equipment.
- Several blue light runs to assess vehicle handling characteristics in varying traffic conditions.

Brigade Response Vehicles

- Vehicle taken to our off road venue at Cannock Chase and several off road scenario's completed.
- Based on the results of the days testing, 3 Toyota Hilux Invincible 3.0litre diesel 4 X 4 vehicles with automatic transmission were purchased

Brigade Response Vehicles



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Brigade Response Vehicles

- On arrival into WMFS, vehicle taken to Millbrook Proving Ground, to carry out various tests to ensure compliance with all JCDD specifications.

Brigade Response Vehicles

- Static Tilt Test



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Brigade Response Vehicles

- Static Tilt Test



Brigade Response Vehicles.

- Brake test 30 mph – stop
 50 mph – stop

With and without A.B.S.

Brake fade 50mph brake down to 25mph
 repeated x 20 times
 60seconds apart.

Gradient capability 1 in 3 and 1 in 4

Noise levels at varying speeds and use of all siren tones.

Pump noise at varying pressures.

Brigade Response Vehicles

- Geometric Dimensions
- Approach angle
- Departure angle
- Ground clearance

Brigade Response Vehicles

- Dynamic Performance
- Mounting and dismounting kerbs at the following angles

30 degrees

45 degrees

90 degrees

Brigade Response Vehicles

- Dynamic Performance
- Time from 0 – 100 metre
- Time from 0 – 64 kph
- Turning circle

Brigade Response Vehicles

- Performance in auto mode
- Performance in manual mode

Brigade Response Vehicles

- Gravel Roads.
- City Handling.
- High Speed Handling.
- Alpine Course.

Brigade Response Vehicles

Any Questions ?

