NWTF
NATIONAL WIND TUNNEL FACILITY

Anechoic Wind Tunnel

University of Southampton

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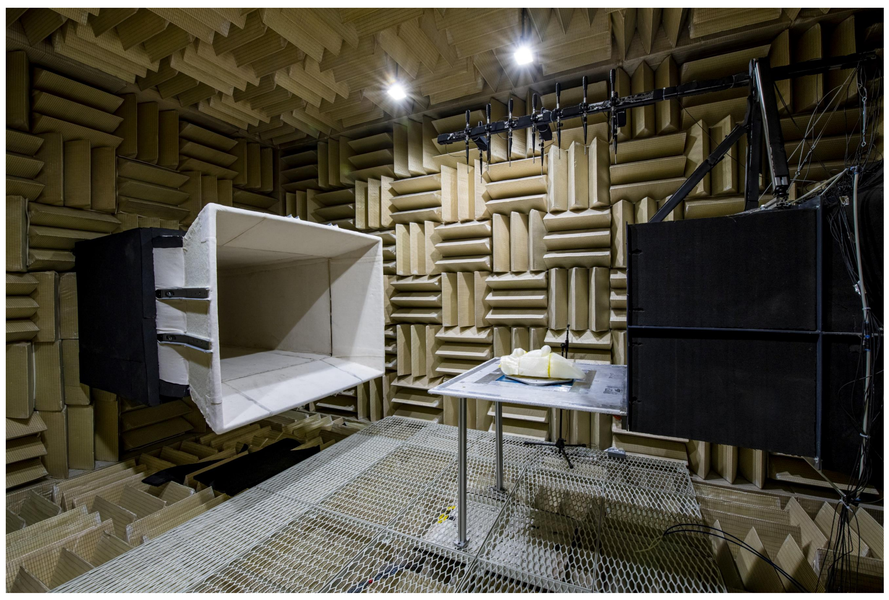
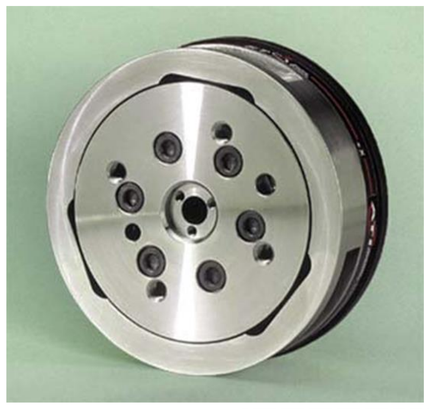
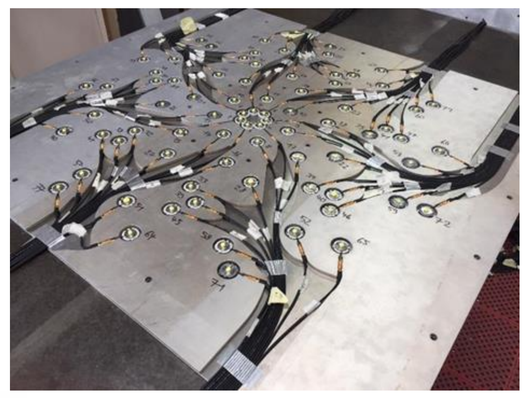


Details of Facility

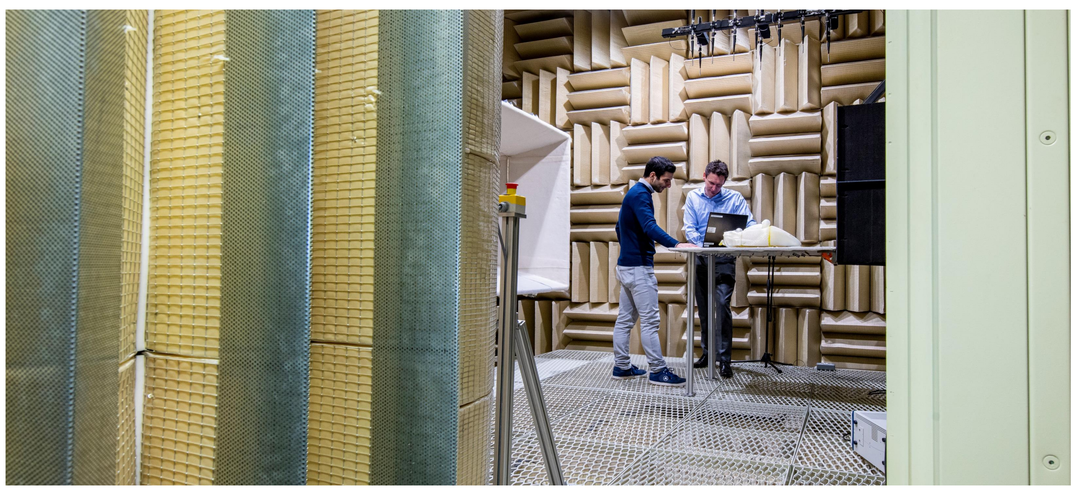
- Closed circuit wind tunnel
- Open test section within anechoic chamber
- Test section 1.0 m × 0.75 m
- Maximum velocity (empty test section) 80 m/s
- Anechoic chamber 8.1 m × 5.1 m × 4.3 m
- Anechoic environment to a nominal frequency of 250 Hz
- 3 sections of ducted silencers to minimise transmitted noise along the wind tunnel

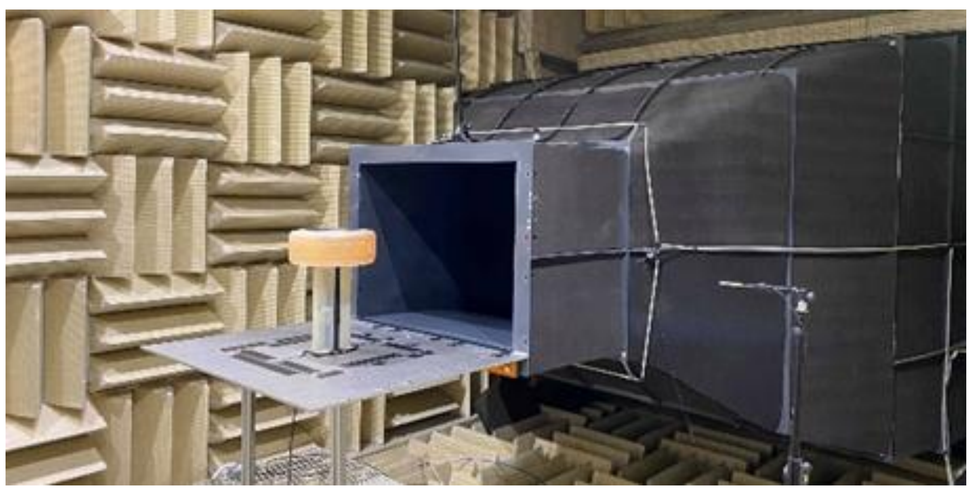




Instrumentation

- 6 component load cells
- ¼ inch GRAS 46E freefield microphones and ½ inch GRAS 46AE freefield microphones
- ¼ inch GRAS 47BX flush mounted microphones
- Phased microphone arrays
- Hotwire anemometry
- Kulite pressure transducers
- ZOC pressure scanner





Uses

- Undergraduate and postgraduate student projects
- Commercial work
- Publicly funded research
- Example publicly funded research projects that used the facility are EU H2020 funded INnoVative dEsign of iNstalled airframe componenTs for aircraft nOise Reduction (INVENTOR), Innovate UK funded Future Landing Gear 2 (FLG2) , Innovate UK funded Landing Advances for a New Decade One (LANDOne) and EU H2020 funded Aircraft noise Reduction Technologies and related Environmental iMpact (ARTEM)

Industrial & Academic Partners

AIRBUS

Horizon 2020 Programme

EPSRC
Engineering and Physical Sciences Research Council

UKRI Innovate UK