# University of Southampton Anechoic Wind Tunnel

**Location:** Southampton

**Owner(s):**
- University of Southampton
  - Southampton
  - SO17 1BJ
  - United Kingdom

**Test Section Size:** 1.0m x 0.75m
- 8.7:1 contraction ratio.

**Anechoic Chamber Size:** 8.15m x 5.5m x 4.75m

**Operational Status:** Active

**Performance:**
- **Mach Number:** 0.23
- **Maximum Flow Speed:** 80 m/s
- **Reynolds No:** 5.4x10⁶/m
- **Total Pressure:** 1.04 bars
- **Dynamic Pressure:** Up to 3.9 kN/m²
- **Total Temperature:** Ambient to 296K
- **Turbulence intensity:** n/k
- **Run Time:** Continuous
- **Typical Recharge Time:** n/a.

**Number and Type of Staff:**
- **Scientific:** 5-8
- **Technical Support:** 1-2

**Test support:**
- Workshop for wind tunnel model design, manufacture and modification capability.

**Testing Capabilities:**
- **Acoustic:** Farfield microphones and phased microphone array
- **Flow visualisation:** Video, surface fluorescent oilflow.
- **Aerodynamic loads:** Capability to measure surface pressures and loads
- **Laser Measurements:** Capability to perform particle image velocimetry measurements

**Specialist Rigs:**
- Arc of farfield microphones to obtain comprehensive directivity information
- Simultaneous microphone array and laser diagnostics
- It will be a unique facility within the UK that is able to conduct airframe noise and loads tests, high speeds train research as well as some specialist propulsive (engine) research