

## Technical specifications

The TRAIN (Transient Railway Aerodynamics INvestigation) Rig belonging to the University of Birmingham has been developed specifically for conducting experimental investigations into railway aerodynamics but is also suitable for studies into road and ground vehicle aerodynamics and other aerodynamic applications.



### The specifications for the rig are as follows:

- The rig is housed in a purpose built enclosure on the rtc Business Park, London Road, Derby
- The overall length of the facility is 150m with a 50m long test section
- Nominal model scale – 1/25th for train testing, but larger road vehicle models can be used
- Model speed - up to 75m/s
- Propulsion system – two rubber catapults, one at each end of the rig
- Track systems - three tracks are provided, two at the standard British railway system track spacing scaled to 1/25th and a third at a wider spacing
- A cross flow facility is provided adjacent to the test section to permit tests to be carried out on the effects of winds on vehicles and the influence of winds on vehicle slipstream flows.
- A wide range of pressure transducers and velocity measuring probes of different sensitivities and types are available for measurements.

### Links and contact

• [Overview of the rig \(/research/activity/railway/research/train-rig.aspx\)](/research/activity/railway/research/train-rig.aspx)

• [For technical specifications of the rig \(/research/activity/railway/research/train-specification.aspx\)](/research/activity/railway/research/train-specification.aspx)

- [Details of railway aerodynamic testing \(/research/activity/railway/research/train-aerodynamic.aspx\)](/research/activity/railway/research/train-aerodynamic.aspx)
- [Details of other possible aerodynamics tests \(/research/activity/railway/research/train-testing.aspx\)](/research/activity/railway/research/train-testing.aspx)
- [Details of some previous applications \(/research/activity/railway/research/train-applications.aspx\)](/research/activity/railway/research/train-applications.aspx)

For further information please contact Professor Chris Baker on [c.j.baker@bham.ac.uk](mailto:c.j.baker@bham.ac.uk) (<mailto:c.j.baker@bham.ac.uk>)